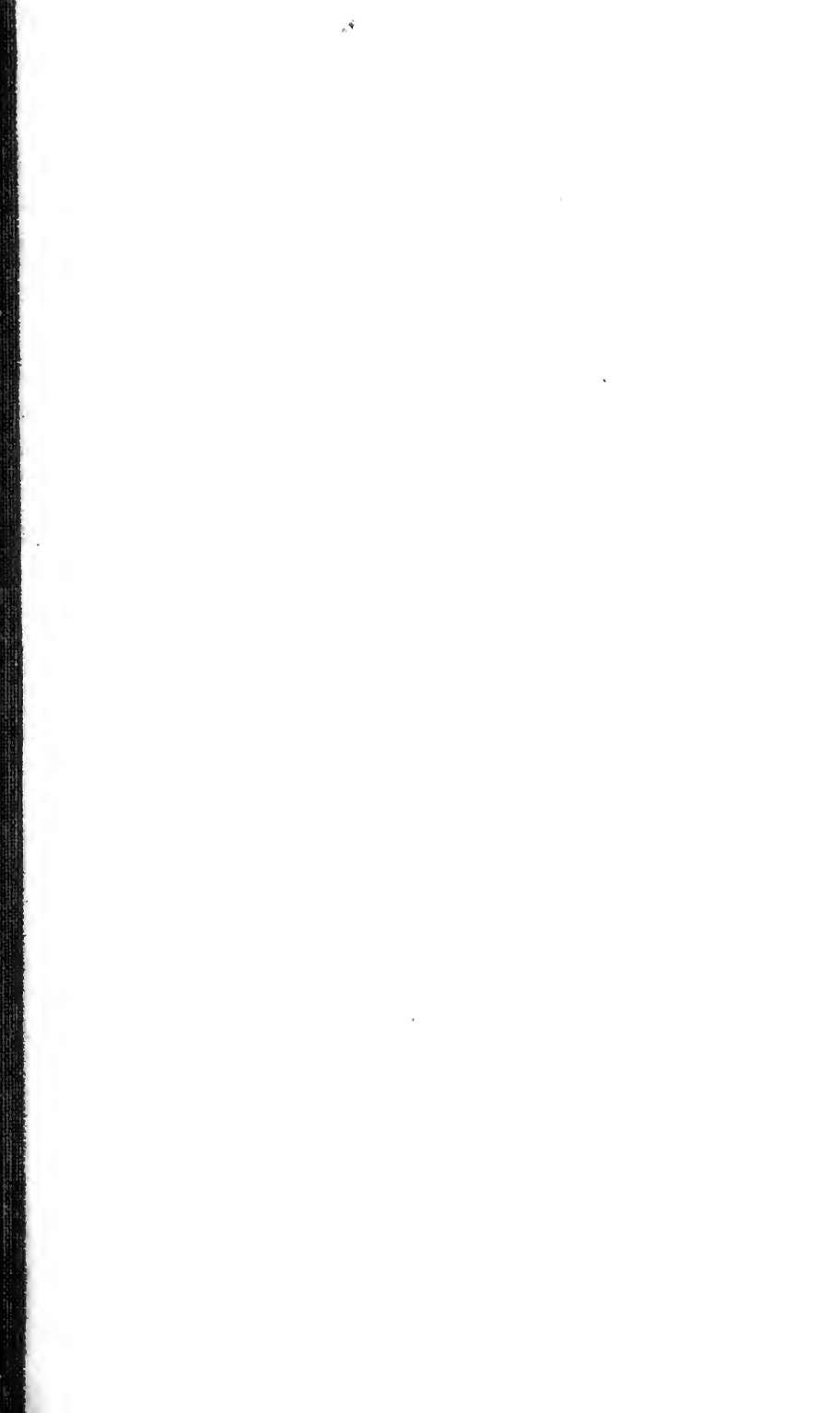


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LONDON MEDICAL GAZETTE.

VOL. VII.

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BEING A

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OF

MEDICINE AND THE COLLATERAL SCIENCES.

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THE LONDON MEDICAL GAZETTE,

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WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 2, 1830.

LECTURES
ON
COMPARATIVE ANATOMY,
AS ILLUSTRATIVE OF
GENERAL AND HUMAN PHYSIOLOGY,

*Delivered in the Medical School of
Birmingham,*

By S. LANGSTON PARKER.

*Introduction—Brain and Nervous System, as
developed in different Classes of Animals.*

GENTLEMEN—Having undertaken to deliver to the students of this school a series of lectures upon Comparative Anatomy, as illustrative of General and Human Physiology, I beg leave, in the first place, to state to you the object I have in view, and to shew the utility of the science, as connected with the more familiar points of medical education—as leading to the more comprehensive knowledge of the living phenomena of healthy organs, and consequently to the more certain detection of disease. I might designate the course I am now commencing, as “Lectures upon the functions, or living phenomena of the healthy organs in man, rendered more apparent by deductions from similar functions existing in other animals, where the organs of which they are the seat are met with on a more simple or more enlarged scale.”

The human subject is composed of a number of varied organs or apparatuses, which are the seat of numerous and important actions; and though one or more of its parts, as the brain, may here be at its maximum of development—by which I mean that it is the most perfect and complicated organ of the kind to be found in any animal—still a great variety of the other organs of the body, as the eye, the ear, the vesicles of the lungs, certain parts of the vertebral column, the

investing membranes of the ovum, various muscular structures, with a number of other parts, are more perfect in different animals than in man; in whom they remain at a minimum or inferior point of organization and development. It is from the study of these dispositions, therefore, in those animals where they are most perfect, that we may expect to acquire the most comprehensive knowledge of their apparent functions in man, where, from their minuteness, or from other causes, their true organization and functions may be imperfect or obscure. Having thus defined the object which I shall attempt to accomplish in the delivery of these lectures, I shall for a few moments consider the nature, importance, and utility of physiology to the student and to the practitioner.

Physiology, in its most extended and literal sense, signifies the history of nature; but in the present day it is universally understood to mean that science which treats of the phenomena of life, and in this sense it is used by authors generally. All the bodies or collections of matter in the universe may be divided into two great classes—those which do not live, as “minerals,” and those which do, as “vegetables and animals;” the latter possessing a mode of existence peculiar to themselves, termed “life,” which is characterised by a certain number of actions not referrible to the general laws of chemistry or physics. General physiology considers the actions of the organs of all living beings, whether vegetable or animal;—but it is to the latter division of the science alone that our attention will be directed during this course of lectures, and more particularly to that department of it named human physiology. This science is the basis of all practical medicine. Anatomy considers the structure and relations of the various organs of the human body in a state of repose or death: physiology is devoted to the phenomena these organs exercise in their healthy condition during life. It extends still farther, and under the title of pathological physiology,

takes cognizance of the morbid actions of parts in a state of disorder or disease. It would be impossible to ascertain the deviation of the function of any organ from its natural state, as manifested in a condition of disorder or disease, unless we were intimately acquainted with the actions of the part in a state of health—unless we knew the influence it had upon other organs, and upon the economy generally. We must know what the healthy phenomena are which organs display, before we can possibly attempt to discover or appreciate the existence and extent of the disorder we would apply remedies to remove. This is the only certain ground and basis of the scientific application of therapeutic agents for the alleviation or cure of disease.

"No study," says Mr. Abernethy, "can be so interesting as physiology—it treats of concerns highly important to us, by inquiring into the means by which we live, and move, and have our being. To those engaged in the practice of medicine, this study is indispensable, for it is evident that the nature of the disordered actions of organs can never be understood or judiciously counteracted unless their healthy actions be previously known."

If this science, then, be of such importance to practical medicine, any collateral science that will illustrate and enlarge its facts, or place them in a more fixed point of view, by which they may be acted upon with more certainty, must likewise be of importance, and consequently should not be neglected in the education of any individual desiring a thorough knowledge of his profession.

"The study of physiology not only requires that we should investigate the nature of the various vital properties carried on in our own bodies, but that we should compare them with similar processes in all the varieties of living beings. Few indeed have studied physiology thus extensively, and none in an equal degree with John Hunter. He was the first who studied comparative anatomy in reference to physiology to any extent, in order to perfect the knowledge of our own animal economy*."

So well aware was Mr. Hunter of the necessity of a knowledge of healthy functions to ascertain disordered ones, that his course of surgery was always prefaced by the physiology of the animal in a state of health, which he considered indispensable to a knowledge of its actions in disease.

Haller declared that human anatomy furnished him with but a few points towards the elucidation of physiology generally. "*Vernum ab humana anatomia* (he observes in the preface to his great work) *physiologia minime plena repetitur. Quotidie exterior,*

de plerarumque partium corporis animalis functionibus non posse sincerum judicium ferri, nisi ejusdem partis fabrica, et in homine, et in variis quadrupedibus, et in avibus, et in piscibus, sæpe etiam insectis annotuerit." And so fully apprised was he of the utility of comparative examination in elucidating human action, that he has assembled at the head of each chapter of his immortal work, the principal facts known in his time on the anatomy and organization of animals.

In support of the utility and advantage of the study of comparative anatomy, as illustrative of the physiology of man, I can adduce the names of all the most eminent men of the present day in England, Italy, Germany, and France—among whom Cuvier, Soemmering, Scarpa, Beclard, Richerand, Magendie, Meckel, De Blainville, Serres, Tiedemann, Desmonlins, Gall, Blumenbach, Lawrence, Abernethy, Home, Carlisle, Earle, Macartney, and Quain, stand pre-eminent.

I shall only detain you with the opinion of one physiologist, selected from the names I have mentioned, in the words of the translator of Richerand. "Of all the physical sciences," says the author, "comparative anatomy is that which furnishes the most useful facts to physiology. Like physiology, it is concerned with organised living beings: there is no need, therefore, of watching against the false applications so often made from those sciences whose objects are matter inorganic and dead; or which study in living beings, only the general properties of matter.

"This general consideration of living and animated beings, so well adapted to unveiling the secret of our organization, has this further advantage, that it enlarges the ideas of him who applies to it. Let him who aspires to that largeness of conception so requisite in medicine, where facts are so multiplied and various, explanations so contradictory, and rules of conduct so unfixed, cast a general glance on this great division of organised beings, of which many in their physical structure so nearly resemble man.

"If the intimate structure of our organs totally eludes our investigation, it is that the finest and most delicate of their constituent parts are of such minute dimensions that our senses have no hold on them. It is therefore well to have recourse to analogy, and to study the organization of animals that exhibit the same organs on a larger scale. Thus the cellular texture of the lungs, which cannot be distinctly shown in man, on account of the extreme minuteness of the smallest bronchia, may be satisfactorily seen in the vesicular lungs of salamanders and frogs. In like manner the scales which cover the bodies of fishes and reptiles, or the legs of birds, give us a just idea of the structure of

* Abernethy's Physiological Lectures, p. 2.

the epidermis, and of the arrangement of its small scales, which lie over each other in a part of their surface. The human structure being more complicated, must produce effects more numerous, and results more varied, and more difficult to understand. In commencing the study of the animal organization by that of man, we do not, therefore, follow the analytic method—we do not proceed from what is simple to that which is more complex. It would perhaps be an easier and more natural way of arriving at a solution of the grand and difficult problem of the human economy, to begin by explaining its most simple terms; to rise by degrees from plants to vegetating animals, as polypi; from these to white blooded animals; then to fishes and reptiles; from the latter to warm blooded animals; and lastly to man himself, placed at the head of that long series of beings, whose existence becomes complicated in proportion as they approach him*.”

Such, among many others, are the advantages held out by the study of comparative anatomy in conjunction with human physiology. The science in itself is of such vast extent, that a course of lectures embracing merely the principal facts of the whole subject must be very extensive, and not to be comprised in the period allotted to the courses of anatomy generally in this country. The first division of our subject, therefore, will extend to the consideration of the brain and nervous system, with the organs of the special and general senses of touch, taste, sight, hearing, and smell; and after which we shall consider the origin and development of the brain in the human fœtus, illustrated by the formation of this organ in the four classes of vertebrate animals.

An animal is an organized body, made up of a number of heterogenous elements, carrying within himself a sac or cavity, of variable form and dimensions, into which are received the aliments or substances necessary for his nutrition and individual existence.

He is placed in the midst of nature, and provided with organs for the purpose of transporting himself from place to place at his will; endued with general sensibility and special senses, by which he is related to the various bodies existing around him, and by which he ascertains their properties and fitness for the purposes to which he would apply them. All animals are not, however, thus complicated, and no definition can be framed which will singly designate their peculiar properties; since at the lowest point of the scale we find many species which seem to partake of the character of the animal and

the vegetable, and to form, as it were, by possessing the characters of both, a link connecting these two great kingdoms or provinces of the universe of nature. The first and most extended peculiarity of the animal is the internal sac for the reception of aliment. No vegetable is provided with any similar organ—it is peculiar to the animal, and still there are certain orders which do not possess it. This internal sac, stomach, or intestine, is the base of the organization of animals—it is the soil from which they grow, the foundation from which the nutrient vessels are derived to form the superstructure of the building. Some animals, as the hydræ, are all stomach. It is this organ which is the base of the great sphere of functions termed vegetative or organic—it is the centre of the organic life, or of that system appropriated to the nutrition and reproduction of the individual.

All animals are provided with two grand systems of organs, and consequently with two grand systems of functions, or living phenomena of which these organs are productive. The first series, that which is most generally and widely extended in nature, is the organic or vegetative, of which we have just stated the stomach to be the centre. The aggregate of the functions of this sphere are subservient to the nutrition and growth of the individual. It is by the exercise of these that substances are converted into the materials necessary to form part of the organization of the animal, by which the particles thus changed are deprived of their deleterious principles, by which they are deposited in the substance of the body, and by which they are excreted or thrown off when become heterogeneous to its nature. These functions constitute the organic life of Bichat; they are the vegetative sphere of physiologists generally, since this life is essentially that of the vegetable, differing only in the organs performing the functions, and not in the functions themselves. The vegetable, as the animal, is provided with an apparatus for digestion or assimilation, circulation, respiration, and secretion. Though these processes are not accomplished by a stomach, heart, lungs, and glands, still their exercise, phenomena, and products, are essentially the same, and thus they have been, in consequence, denominated the vegetative sphere of the phenomena of life. The vegetable, then, and the organs of the “organic” life, are but the sketch or ground-work of the animal, and it becomes necessary to establish his connexion with the universe around him, by means of contrivances or apparatuses termed senses, fitted to appreciate the properties of those bodies, whether solid or fluid, which are more or less extensively diffused through nature; and here we are insensibly, and almost unavoidably, led into another department of science, viz. that of physics or natu-

* Richerand's Elements of Physiology, by G. J. M. De Lys, p. 63.

ral philosophy, by which we ascertain what the properties of bodies are; these generally relate to their surface, whether rough or smooth—to their consistency, whether hard or soft—to their temperature, whether hot or cold—to their distance, to their odour, and to their taste.

Thus we must have senses so organized that they must be enabled accurately to judge of these varieties in the structure of bodies, and likewise to distinguish and appreciate the existence and variations of light and sound. To ascertain these properties of bodies, animals are provided with the general sense of tact or contact possessed by the integuments in all parts of the body, and the special senses of touch, taste, hearing, smell, and sight, for which we have the peculiar organization of the tongue, the nose, the hand, the ear and the eye. The aggregate of these phenomena constitute what is termed the life of "relation," since by them the animal is related to external objects. These animal functions, or senses, are more or less complex in their mechanism, as the properties to be ascertained are more difficult of appreciation. To discover the odoriferous, or sapid properties of bodies, it is sufficient that these particles should be applied to the surface of a membrane peculiarly organized to receive them, as the pituitary membrane of the nares, and that covering the tongue, and forming the commencement of the gastro-pulmonary system, whilst sound and light require complicated mechanical contrivances to collect and concentrate their vibrations and rays.

In addition to the vegetative and sensitive systems of organs, we have a third, by which the being is enabled to change his relation with surrounding bodies, and by which he is approximated or removed from the objects he desires or fears. This constitutes the locomotive order of functions, the composition of which is binary, being made up of an active and passive series of organs, as bones and muscles.

The locomotive and sensitive systems furnish those phenomena which are more particularly the property of the animal, which are always developed in greater perfection as we ascend the scale of existence from the zoöphyte to man; the union of their actions bearing the term of animal life, since their existence and exercise are exclusively appropriated to the animal, and form the predominant features of his organization.

These two systems of functions, forming the organic and animal lives, would however remain inert and powerless without the addition of a certain vital influence, emanating from a series of organs placed in the interior of the animal, and denominated the nervous system. This system, considered in its totality, is a collection of medullary cords or filaments, enclosed in a fibrous sheath or

theca, and ultimately composed of globules, connected by a semi-fluid substance, resembling gelatine; these cords, thus formed, communicating with central masses of nervous substance similarly organized.

The anatomy and physiology of this part of the economy have occupied the attention of the *savans* of all ages and countries; and the importance, utility, and interest attached to its study have led me to devote this course to the consideration of this System, but more particularly of the nerves of the animal functions, and the special senses of which they are immediately the agents.

This system is like the functions of living beings generally, divisible into two parts—the organic and animal—differing from each other in their structure and functions.

The nerves of the organic life are an assemblage of filaments forming a communication between the various organs of the thoracic and abdominal cavities, and certain bodies termed ganglia, which are the centres from which the nervous influence is distributed. The number of these ganglia depend upon the number of organs to be supplied in different animals, and likewise on the complexity of their structure. In the lower orders of the invertebrata, as the *Vermes* and *Radiata*, each ganglion is a separate nervous centre, not dependant for the existence or duration of its functions upon any communication with other parts of the system, as the brain or spinal cord in the higher classes;—and by division we may make as many separate animals as there are different ganglia. It is the organic system of nerves only which is met with in all animals inferior to the pisces. In the higher animals, where an additional system is met with, as the *mammalia*, *aves*, *reptilia*, and *pisces*, the ganglia not only communicate with their respective organs, and with each other, but they have a connexion with the nerves of the animal life and the brain, to which they are in a great measure subservient; this organization, when carried to its maximum, as in man and the higher mammalia, establishing in the completest manner possible the centralization of life, or the individuality of the being.

We now come to speak of the nerves of the animal life (to the organic system we shall return at a subsequent part of our lecture). This system is generally considered to be composed of the brain and spinal cord as its centre, and the cranial and spinal nerves as its lateral appendices, arising from the central parts, and distributed to the organs they are destined to supply. We shall consider it after the manner adopted by Ducrotay de Blainville; the views of this distinguished lecturer and anatomist seeming best calculated to throw light on this much-litigated point of physiology.

The animal system of nerves is formed, in

its totality, by a series of ganglia, of various sizes, which on one side receive the communications from the particular organs they supply, and in which they establish a distinct and particular life; and on the other communicate with the brain or central ganglia, to establish the general life of the body. This system is composed of a common centre, placed in the interior of the vertebral canal and in the cranium, on the sides of which are placed the ganglia of the different functions. The superior extremity of this central mass, which is the brain, is itself an assemblage of lateral and central ganglia, the former, or lateral ganglia, being subservient in their actions to the central, which are the organs of the intellectual faculties. The central ganglia, or those of the moral and intellectual faculties of animals, are the cerebral hemispheres and cerebellum; the lateral ganglia, or those of the special animal senses and functions, are—

1st. The olfactory, which in all animals where the animal propensities preponderate over the intellectual, is a lobe of medullary matter distinct from the brain, and to which the first pair of nerves is appended. In man it is merely rudimentary.

2dly. The optic, which in man bears the name of *tubercula quadrigemina*.

3dly. The ganglia of the fifth pair.

4thly. The acoustic ganglion, or grey matter of the fourth ventricle of the brothers Wenzell.

5thly. The ganglia of the eighth pair, which may be termed the lobes of the digestive and respiratory functions, and from which arise the *par vagum* and *glosso-pharyngeal* nerves.

In man, where the ganglia of the intellectual faculties, which are the cerebrum and cerebellum, predominate, the others are concealed and covered by them; but in the other animals, where the cerebrum hemispheres and cerebellum are gradually reduced, the ganglia of the senses become very apparent. In the *pisces*, for instance, the aggregate of the brain is a series of isolated ganglia.

Of these seven ganglia, which compose what is generally termed the brain, two have no direct connexion with any external organ; these are the seat of the moral and intellectual faculties. The five other ganglia receive the nervous filaments from special organs, and must be considered under three points of view—the branches which they distribute to the sense or organ they animate, those by which they communicate with other ganglia, which are the source of a variety of sympathies, and the means by which their connexion is established with the central ganglion, or the brain, properly so called.

The first ganglion of the sensitive system is the olfactory, situated at the most anterior part of the cranium; it is merely rudimen-

tary in man, and hardly perceptible; but in descending the scale of animals, as the organs of the senses acquire predominance, and those of the intellectual faculties are reduced, the olfactory ganglion, or lobe, acquires a gradual increase of development. It is more voluminous in the lower than in the higher mammalia, strictly corresponding with the prolongation forwards of the face. In the three inferior classes it is never absent; and in some of the *pisces*, forms the chief part of the brain. The olfactory nerves are immediately connected with the ganglion, which communicates with the anterior lobes of the cerebrum in a manner we shall afterwards more particularly notice.

The second ganglion is the optic, placed in the centre of the brain, more distant from the organ it supplies than the one we have just described; it constitutes in man the lobes of medullary and cineritious matter, termed *corpora quadrigemina*, which are situated on the superior surface of the brain, and are covered by the cerebrum and cerebellum. As these two organs diminish in the lower animals, the optic lobes or ganglia are visible on the surface of the brain, and bear considerable proportion to its whole mass in the *aves*, *reptilia*, and *pisces*. It is connected with the sensitive nerves of the eye on one side, and on the other is more or less intimately connected by means of processes of medullary matter with the central ganglia of the brain.

The third ganglion, or that of the fifth pair, commonly termed the *Casserian*, is not immediately incorporated with the central system; it establishes a communication, by means of its numerous branches, with the motive and sensitive segments of the *medulla oblongata* on one side, and with all the senses and integuments of the face on the other.

The fourth sensitive ganglion is the acoustic, which furnishes the *portio mollis* and *portio dura* of the seventh pair. This portion of the encephalic mass may be divided into two parts—the grey bodies of the brothers Wenzell, in the interior of the fourth ventricle, immediately connected with the attachment of the *portio mollis*, and the trapezoid body of Tiedemann, bearing the same relation to the *portio dura*. These parts are rudimentary in man, or hardly perceptible, from the great development of the *pons varolii*. In the *ruminantia* they are carried to a great excess of development.

The fifth and last ganglion is that connected with the origin of the *par vagum* and *glosso-pharyngeal* nerves. It is best studied in the class *pisces*, and especially in the carp, where the volume of the ganglia of the eighth pair exceeds the size of the whole brain.

These ganglia are proportionably more developed in the lower animals than in man, as

in them the organs of the senses, on which they depend for their subsistence, are carried to a greater degree of perfection. In man, on the contrary, reason is substituted for instinct, and for this excess of development and perfection in the functions of the special senses.

Upon the sides of the central prolongation of the nervous centre, contained in the vertebral canal, are situated another series of ganglia, with which the spinal nerves are connected. These are the ganglia of the voluntary motions and general sensibility; their number is equal to that of the spinal nerves, and they are in direct proportion, with regard to volume, with the size of these nerves. It is through the medium of the central part of the spinal cord that the brain exerts its influence over this part of the system. Such is a very general view of the nervous system of animal life; to its particular points we shall return in subsequent lectures.

CLINICAL OBSERVATIONS

ON

WOUNDS PRODUCED BY FIRE-ARMS.

BY M. DUPUYTREN.

THE wounded, during the late revolutionary struggle, were received into the Hôtel Dieu, and treated there without distinction of party—citizens and military being attended indiscriminately in the same wards. M. Dupuytren found no ill effects from this, but rather the contrary; those who came in foes, generally went out friends, or at least in better temper with each other. For the first few days it was easy to distinguish the parties; the soldiers gloomy and sullen, and the citizens in high spirits and elated with their success; but the distinction soon became imperceptible.

The wards were visited by the Duchess of Orleans, now Queen, and by the president of the Seine, M. Lafayette. The object was kind and benevolent, and the immediate moral effects were as satisfactory as could be desired, but the consequences were not so. The same evening generally ten or twelve patients in each ward became worse, some of them delirious; and the next day several who had been expected to recover sunk under their complaints. The visits of private individuals were attended with similar results; the emotions of pleasure or pain felt by the wounded

on these occasions, frequently proved fatal to them. From these inconveniences the military hospitals suffered nothing—their discipline and regulations protected them from many troublesome circumstances to which the civil hospitals were exposed. Much annoyance also was experienced by the wounded from the noise of repeated discharges of musketry in the neighbourhood of the hospital; want of sleep, fever, delirium, and other disturbances, were severely felt. One patient complained bitterly of the inconvenience he suffered from the random shots within hearing; they affected him with spasms, he said: the next day he was seized with opisthotonos, which went on till it terminated fatally with general tetanus in thirty hours after.

It may be worth observing that much danger was threatened to the patients by the intended burial of the dead, which was to take place at the southern extremity of the aisle, within about 3 or 400 paces of the Hôtel Dieu, and in a populous quarter. There were 180 dead bodies lying in this hospital, 120 at the Morgue, and 100 at least in the vicinity. The use of chlorurets and strata of lime would have been ineffectual, perhaps, in preventing the spread of infection. But M. Bavoux, who was the prefect at the time, and M. Lafayette, showed themselves most anxious to profit by the suggestion of the surgeon of the hospital, (M. Dupuytren); and about 400 bodies were transported in boats beyond the city, outside the barrier de la Conférence, where they were buried without further risk to the living. It would have been desirable that the same plan had been adopted for the disposal of all the dead who had fallen in the conflict, and that none of them had been suffered to be interred in the heart of the city, in the market of the Innocents, and in the Louvre. The observance of these testimonies of respect for the dead ought never to be purchased at the risk of so much danger.

We have now a few remarks to offer, said M. Dupuytren, on the sort of wounds which most generally occasioned death on the spot. We speak from report, as well as from what we have ourselves observed in the Morgue. The greatest number sunk under wounds of the head, chest, and abdomen; few from severe mutilation, for these reasons perhaps,—in wounds of the head and neck,

which were followed by immediate death, the brain or spinal marrow was generally found to have been injured; they were either pierced through and through, or the balls were lodged in the containing cavities. In the immediately fatal wounds of the chest, the heart, great vessels, or lungs, were damaged; in those of the abdomen, the great vessels, or other vital organs contained in that cavity. In one instance the two thighs close to the pelvis were carried away by a cannon-shot; another dead body had the greater part of the intestines removed by a similar shot. Other grievous mutilations of the breast, legs, and arms, have been witnessed, but most of those received in the extremities were not immediately fatal. It would appear, then, that the wounds which occasioned sudden death may be thus arranged. 1. Those of the chest, by which the greatest number suffered immediately. 2. Wounds of the abdomen, which were immediately fatal in the next degree. 3. Wounds of the head; and, 4, severe mutilations, from which the smallest number of sudden deaths occurred. The fatal wounds of the head were numerous, and they were mostly received by those musketeers who stationed themselves behind walls and parapets, and who on raising their heads to fire, were exposed and hit. Other marksmen, not so cautious, or more courageous perhaps, exposed themselves more freely behind the parapets; their breasts were consequently uncovered as well as their heads, and this accounts for the numerous lesions of the chest. As for those of the abdomen, which were also numerous, they seem to have been in a great measure owing to the precision with which aim was taken in these conflicts: in this respect the fighting of irregular musketeers differs much from the usual practice of troops *en masse*.

In reply to a question proposed to him in writing—what are the effects produced by a firelock charged with powder only? M. Dupuytren observed that he knew a case in which a man in a quarrel was shot with such a weapon, the muzzle close to his abdomen. His clothes, and the parietes of his belly, were lacerated, the wound penetrated to the interior, and the man fell dead. He was examined, and M. Dupuytren was called in to decide what the piece was charged

with—whether shot, ball, or powder only; nothing was found but the wadding. Many similar cases have been reported. It often happens that persons determined to commit suicide, forget in their bewildered state of mind, to put the ball into their pistol; and frequently wretches who wish to shock their friends with their calamity, discharge into their mouths pistols charged only with powder, but the effects are dreadful: the wadding traverses the palatine vault; if it reach the other side, the vertebral column escapes, no doubt; but there are other strange things affected. The sudden expanding of air in the month from the explosion, lacerates the velum, and the lips and cheeks are torn in a radiated manner, in consequence of the excessive distention: sometimes the lower jaw is fractured.

Commotion or Stupor from Gun-shot Wounds.—This is not an invariable consequence of such wounds, but chiefly follows those inflicted by cannon or heavy shot. The disturbance of the system may be of a greater or less extent—general or only local; it is most usually the consequence of *spent balls* which strike the chest, abdomen, loins, or extremities. Musket-balls, however, rarely produce the affection, except when they strike the superior articulation of the shoulder; small shot never, except when they wound *en balle*, or in a lump. In shocks of this sort there is an insensibility, a deficiency in the consciousness of pain under the affliction of severe wounds. Stimulants are administered with good effect when used cautiously and in time; and when the pulse has been raised blood may be taken from the arm freely. The consequences of this sort of commotion are frequently a spasmodic, seldom an inflammatory, affection of the liver, marked by a slight dead pain in the hypochondriac region, and by more or less of a jaundiced complexion, though always in less degree than in true jaundice. The appearances after death present, however, no inflammation or abscess in the organ. If the commotion be slight, it goes off in general of itself: if severe, it may be fatal; the patient neither recovering sense or consciousness, and the principle of life proving incapable of reaction.

Hæmorrhages.—Wounds from fire-arms are by no means the *dry* wounds that some writers pretend: for in-

stance, there was a case brought to the hospital—a man wounded on the 28th—whose femoral artery was opened by a heavy shot; he died of hæmorrhage before the artery could be tied or the limb cut off. Hæmorrhage is the first effect of gun-shot wounds that must be remedied. It is of the utmost importance to be acquainted with the effects produced on the vessels by cannon-shot, musket-balls, &c. These are next to be considered: when the soft parts are violently divided by a fire wound, they are extensively mortified; the spot is converted into one eschar, in which the vessels, as well as all the neighbouring parts, are involved; the calibre of the vessel disappears, the blood circulates in it no longer, it clots towards the end of the tube, thereby preventing the circulation. This accounts for wounds from fire-arms bleeding less than other wounds; but this obstacle arising from the clotting of the blood and the mortification of the coats, which is so effectual in staunching a vessel of small or moderate diameter, cannot resist the force of the circulation in vessels of the first order; and hæmorrhages, primitive or consecutive, are the never-failing consequence. When a vessel is cut right across by a ball, there is a solution of the continuity of its coats, but its extremity is closed up by the eschar and clot; it is besides retracted. But this is not always the case. If the projectile hit the vessel laterally, it will produce an eschar, no doubt; but this may or may not obliterate the calibre. If the former, there will be no hæmorrhage; if the latter, there will be consecutive hæmorrhage. Other effects, too, may result from such a wound—such as aneurisms of the false primitive or false consecutive character, or the varicose kind. Their formation may be accounted for in this way:—

The eschar formed on the coats of a vessel becomes detached at the end of some days; but before it drops off, the previous inflammation has hardened the surrounding tissues, and if a neighbouring artery and vein have received a similar injury, the blood, in consequence of the induration, passes directly from the artery into the vein, and hence the existence of a varicose aneurism. A charge of shot fired from a very short distance may produce an accident of this sort. M. Huxson consulted with

M. Dupuytren, some years ago, in a case that occurred in his practice: a gentleman had gone into the country on business, and having some leisure one day, accepted an invitation to partake of the pleasures of the chase. His friend was an awkward sportsman, and reserved his fire until the hare which he wished to take down got in a direct line between him and the valuator. The latter received the whole contents of the gun in his belly, thighs, and genitals: for a month or six weeks there was nothing peculiar in the case. At the end of that period the wounded man thought he heard a sort of whistling sound in his thigh; it was like that, in fact, which is heard when the blood is passing from an artery into a vein; with a hearing trumpet it was very distinctly audible. When pressure with the finger was applied above the place, the noise ceased, but it became louder when the pressure was made below. The man, however, enjoyed good health; he merely wore a bandage, by which pressure was kept up. Now it was a single grain of shot that did this mischief; but it is still more remarkable that a musket-ball may produce results exactly similar.

The periods at which hæmorrhages usually discover themselves are well worth observing. Primitive hæmorrhages generally occur the moment the wound is inflicted; they are indicated by the immediate flow of blood; and then is the time for arresting them. Sometimes there is a lapse of one or two hours before they are apparent. This arises from the shock the system has received from the ball, or bullet; its effects are like those of syncope—sometimes preservative, sometimes palliative; and as in syncope, so in the case of stupor; when the patient revives, the effort of the circulation prevails, and the hæmorrhage is visible. As this may not occur for two hours after the wound, there is the utmost need of vigilance in the attendants. If this period pass over without any hæmorrhage, the latter will seldom occur until the eschars drop off from the soft parts; and then the hæmorrhage proceeds in the following manner. The eschar becomes detached; the clot remains—a clot more or less firm, that shuts up the extremity of the vessel. It then frequently happens that an abrupt motion of the part, a sudden

thought of the mind, give an increased activity to the circulation; when, the resistance being taken off, hæmorrhage ensues on the tenth, twelfth, or fifteenth day, which is the usual period of the detachment of the eschars. The wound must, therefore, be watched with the more care the more closely it traverses the course of the vessels, and inasmuch as the loss of even a small quantity of blood by consecutive hæmorrhage is far more serious than the losing of three times the quantity by the primitive, a patient suffers less from the loss of six, eight, or ten cups of blood at the moment he receives his wound, than from three, two, or even one, on the fifteenth day. It is the same case after amputations: the patients are, in fact, then in a debilitated condition, from bleedings, low diet, inflammation, suppuration, &c.

Consecutive hæmorrhages are rendered still more serious by reason of another circumstance. The primitive hæmorrhage manifesting itself superficially, the bleeding vessel is readily distinguished, seized, and tied; but this is almost always impossible in the consecutive kind. Thus, in amputation, having sponged and caught hold of the vessel, the extensibility of the sound cellular tissue permits it to be drawn out, and the tissue from its soundness does not give way under the ligature for 5, 6, 7, or 8 days, when the clot is perfect, and the ligature complete. But in consecutive hæmorrhages, owing to the closing of the parts, it is exceedingly difficult to find the vessel; the parts must be uncovered and separated, and then perhaps the vessel is situated at the point of a cone, where it is with the utmost difficulty it can be perceived. When found, its extremity is in a state of inflammation; the surrounding tissue is also inflamed; and this deprives it of its natural extensibility, so that it gives way, as well as the coats of the arteries: the ligature in consequence fails, and the hæmorrhage recurs in an hour or two. The plan to be pursued in this case is to tie the artery further up, a plan which was put in practice by M. Dupuytren eighteen years ago in the Hotel Dieu: it was advocated in a thesis by M. Lacombe, and disputed in opposition by Percy. The artery in the case alluded to was found at the depth of an inch and a half from the surface, and to put a ligature on its extremity impossible. On the same principle, in

the year 1814, several ligatures were tied on the carotid for injuries of the branches of that vessel.

But consecutive hæmorrhage may also occur in the smaller trunks. An illustration of this may be seen in one of the wards; when, for consecutive hæmorrhage of one of the smaller ramifications of the temporal artery, compression was employed two or three times without success. After Ambrose Paré's method, M. Dupuytren fixed a ligature on the main trunk, but with the allition of the diaphragm cylinder: this was attended with complete success. Three days ago a patient in the city was suffering much from consecutive hæmorrhage: he has since come into the hospital. Compression was of no avail: when he came in there was a clot at the mouth of the vessel, and no hæmorrhage; but on uncovering the wound and sponging it, blood flowed freely from the posterior branch of the temporal: compression with the finger stopped the jet, but the blood still drained from two or three branches higher up. A spatula heated to whiteness was applied to the upper and lower mouths; and in this way the hæmorrhage was effectually checked.

[To be continued.]

RECOVERY FROM RUPTURED UTERUS.

To the Editor of the London Medical Gazette.

Bury St. Edmund's, 19th Sept. 1830.

SIR,

As the following case may be of interest to our profession, I have to request that you will insert it at your earliest convenience in your excellent journal.

I have the honour to be, sir,

Your most obedient, humble servant,
P. MACINTYRE.

Mrs. Cuthbert, aged 32, was taken in labour whilst on a journey through this town, on the evening of the 6th August last. The full period of gestation was completed, but notwithstanding her advanced state of pregnancy, she had travelled upwards of 200 miles on foot within a very short period. On her arrival here, she called in the aid of a female practitioner, who remained with her during the night of the 6th, and

who described the presentation to have been natural, and the labour forward and rapid in progress. This person stated, that during a pain, from which she expected the immediate expulsion of the head of the child, the patient at the time on her feet by the side of the bed, a gush took place, the head of the child receded, and the labour pains ceased entirely. This took place about 5 o'clock in the morning of the 7th. About 7 o'clock, I was called, and found the poor woman in great distress. The floor of the small apartment had been flooded over. Drops of cold sweat stood on the patient's face, which was ghastly and anxious. She complained of constant "tearing pain." Her breathing was laboured and oppressed. Her pulse 130, small and feeble. She was vomiting dark-coloured fluid. The short history which I obtained of the case at once convinced me of its nature. On laying my hand on the abdomen, the form of the child could be distinctly felt through the parietes. On examination, I found the *os uteri* rigid, and so closely contracted as hardly to admit the point of my finger. Passing my hand forward to the right side of the cervix, I readily ascertained the commencement of the rupture, which extended towards the fundus. The child was high up in the abdomen. Under these circumstances I thought it advisable to summon further aid, and Mr. Dalton, an able and experienced surgeon of this town, soon joined me. That gentleman at once agreed with me as to the nature of the mischief. On introducing his hand, he found the laceration to be as I have described it; and whilst tracing its extent, he fortunately came in contact with one of the child's feet. He soon got hold of the other, and brought both down. The extraction was proceeded with gradually and firmly; but the great difficulty was found to consist in bringing the head through the outlet of the pelvis. The pelvis was of contracted dimensions; and I learned that her former labours, two or three in number, had been attended with great difficulty. We found the obstruction to proceed from the superior maxillary bone of the left side being fixed on the symphysis pubis. The head of the child thus lay obliquely in the pelvis; the right ear nearly opposite the sacrum, and the chin and mouth being the nearest presenting parts. We tried, by fixing the fingers

on the lower jaw, to place the head in a better position, or to extract it, without success. Perforation through the basis of the cranium could, in this case, we considered, little facilitate its passage. We found the long forceps of little use, it being difficult to fix them properly. The vectis was applied on the right side, over the external orbital process reaching to the coronal suture. The long-continued and repeated efforts which were persevered in before the cranium could be moved, were extraordinary. After two hours hard application, the head was forced down. The child had been dead for many hours. The vectis had borne in that side of the frontal bone upon which it was fixed. The placenta was soon afterwards found detached and extra uterine, and was easily extracted. It required some care to prevent protrusion of the intestines along with the placenta. There was no farther flooding. The patient still complained of great pain and tenderness. She was much exhausted; and neither her general appearance nor pulse augured favourably of the termination of her great sufferings. The difficulty of breathing was of course much relieved. Opiates were given at intervals throughout the next four-and-twenty hours, and some subsidence of the vomiting and violent pain were procured. On the following morning, more to my surprise than otherwise, I found the severity of the symptoms, generally, ameliorated. The vomiting had almost ceased; the tenderness of the abdomen had not increased; still I thought it a safe precaution to apply 20 leeches, and keep up fomentations. Saline mixture with laudanum was administered every four or six hours. On the 9th the countenance began to lose much of its anxiety, and the tenderness and pain to decrease. The bowels were readily relieved by a small dose of castor oil, and the urine was voided with ease. The pulse was also much improved, being considerably less frequent and softer. Though we naturally calculated on some injury to the soft parts, from the strong application of the vectis, I was agreeably surprised to find that no sloughing or other inconvenience had taken place. On the 18th day she was able to sit up, and by the 30th was able to resume her journey.

CASE OF
EXTRA UTERINE CONCEPTION.

BY GEORGE DOUCHEZ, ESQ.

Member of the Royal College of Surgeons in
London, &c. &c.

THE following are the particulars of a case of extra uterine conception, which lately fell under my observation.

Mrs. G—, æt. 26, a newly-married lady, following the profession of an actress, who had previously had three children by a former husband, and had suffered from several abortions, was married last January, and became pregnant about the month of March. In the middle of May she was seized with uterine hæmorrhage, and in a few days she aborted, and recovered by the assistance of the remedies usually prescribed in such cases. About the latter end of July she was again seized with flooding, attended with severe pain in the hypogastric region, and which occurred to so alarming an extent as to frighten all her friends. She was doubtful as to whether she was again pregnant; she had menstruated about a month after her last abortion, but had passed over the second period without any "show" of the catamenial discharge. She had all the constitutional symptoms of pregnancy—such as heartburn, sickness of the stomach, &c. The diluted sulphuric acid, with infusion of roses, and the occasional use of sedatives and purgatives, were the remedies employed. She continued in this state for about a fortnight, with excessive menstrual discharge; and, from the large pieces of coagula which had passed, it was doubtful whether she had or had not miscarried. During this last attack Dr. Merriman saw her, in consultation with myself, who was also doubtful as to whether she had aborted. She refused to submit to an examination per vaginam. However, she apparently recovered; so much so, that she had been able to take much exercise; and on August 17th she had been with her husband to Dulwich, returned home in the afternoon, and entertained some friends to dinner, in apparent good health. About ten o'clock the next morning, as she was in the act of dressing herself, she was suddenly seized with a severe pain in the lower part of the abdo-

men (increased upon pressure), followed by syncope. Mr. Painter, a respectable practitioner in Howland-Street, was immediately sent for, who, on his arrival, found the pulse beating faintly, the skin cold, the lips and countenance excessively bleached; indicating that there was some internal hæmorrhage. He judiciously directed stimulants and applications to restore the natural warmth of the body, but they produced no benefit whatever. At five o'clock these symptoms became more alarming, and the vital powers continued to diminish until the time I saw her, which was about half-past twelve, when the pulse could not be felt at the wrist; and in an hour after my arrival she expired.

Examination post-mortem.—I examined the body about fifty-four hours after death, in presence of Drs. Merriman and Robert Lee, and Mr. Painter.

On opening the abdomen, we found between two and three quarts of blood in its cavity. On removing this, was found a tumor attached to the right fallopian tube, which, upon further examination, was found to be an extra uterine conception of about ten weeks. There was a small laceration of the sac, from which the fatal hæmorrhage had occurred. The embryo was perfect, with its umbilical cord and placenta. The uterus was somewhat enlarged, but healthy, and upon passing a probe through the fallopian tube there was no obliteration to account for the occurrence. A remarkable fact was observed in this case—that in the uterus no deciduous membrane was formed, as has generally been stated to be the case in similar instances, but the existence of which membrane in these cases has always been doubted by my friend Dr. Lee. The interior of the uterus was merely covered by a thin coat of mucus. The ovaria were natural. The right ovary contained a large corpus luteum. The liver was larger, and unhealthy in its structure. The remaining viscera were healthy.

The preparation is in the possession of Dr. Lee.

9, Lower James-Street, Golden-Square,
Sept. 11, 1830.

SYDNEY GUELPH CHURCHILL—A
RIVAL OF JOHN ST. JOHN LONG.

*To the Editor of the London Medical
Gazette.*

SIR,

As a great sensation has been excited by the case of the celebrated Charlatan, who has so recently figured before the public, perhaps the circumstances of a minor case, that lately occurred in this neighbourhood, may not be altogether uninteresting to your readers. Nearly four years since, a man about 45 years of age, a perfect stranger, of very common place and eccentric appearance, came into the vicinity of Mevagissey in this county, and taking up his abode in a very obscure lodging, set up as a practitioner in medicine. His grotesque appearance, his imperfect pronunciation of English, and his refusing to give his name, acquired for him soon among the multitude the appellation of the French doctor. The air of mystery which thus seemed to surround him, attracted very considerably the attention of the crowd; and the lovers of the marvellous, and the prone to superstition, did not fail to indulge their credulity in the persuasion that no small stock of genius was concealed under such mysterious externals. Notwithstanding, therefore, that his *tout ensemble* exhibited a forbidding and suspicious contour to the more discriminating part of society, yet as something mystical has ever been more or less associated with physical science in the opinion of the people at large, he was soon viewed by the uninformed as a depository of medical learning, and a moving monument of professional skill. He soon acquired no small share of practice, and no trifling degree of éclat among a certain class of valetudinarians. Although his mode of practice was barbarous, and his blunders every day palpable and mischievous, yet he retained his ascendancy over their minds, and proceeded in a career of practice that was surprising and lamentable. He now by degrees issued out from within the shell of his former mystery, spoke English very well, assumed an habitation and a name; proclaimed himself related to the Duke of Marlborough and the royal family, and yeletpt himself *Sydney Guelph Churchill*. His original title, however, of the French

doctor still continued with the public. Among the common people, such was the infatuation concerning this obscure, illiterate, and equivocal stranger, that every malady of a complicated and extreme character, and which had previously baffled regular science, was eagerly submitted to his masterly tact; he was applied to from all quarters, and viewed by the ignorant as an oracle, who could discover and cure diseases by a species of magic influence. I believe serious and fatal have often been the results of this blind and culpable confidence; many instances have occurred in which sufferings have been aggravated, and even life sacrificed, by the preposterous treatment of this pretender, whose impudence was only surpassed by the ignorance and imbecility of his patients.

At length a case occurred in the parish of Vryan, which brought this pseudo-medicus under the cognizance of the laws of his country. In the month of April last, the doctor went to a village called Cairn to extract a tooth for some one, when an old man, about 87 years of age, accidentally meeting him, asked his opinion of a small tumor he had had upon his lower lip for several years. The practitioner, with an air of great gravity and self-importance, told the old man the tumor was of a most serious nature; that in order to avert his speedy dissolution, it was imperatively necessary it should be immediately extirpated; that he would most skilfully operate upon it; and thus achieve, by his consummate art, the prolongation of his life. The old man, awed by his tone, and allured by the prospect of a further extension of his sojourn here below, consented, and at a time appointed, the operator came to his house. He commenced, and with a small knife excised the tumor. The vessels of the part, however, being somewhat enlarged, a profuse bleeding took place, which, after some continuance, excited the remonstrances of a by-stander, and induced faintness in the aged patient. The operator, now rather discomfited, sent into the village for some cobbler's wax as a styptic, which failed; being still rich in resources, he next searched a neighbouring barn for cobwebs; but these also refusing their efficacy, the unhappy patient began to sink, and he was carried up-stairs to bed in an exhausted

state. The doctor now, appalled at the failure of his means of suppressing the bleeding, rather abruptly took leave of the alarming scene, giving the patient's daughter the balmy consolation that "the blood would certainly stop when the sun went down." The hæmorrhage, disobedient, however, to the great orb, continued until the faintness of the poor man caused it at length to stop; as, however, the vessels had not been secured, the bleeding returned at intervals, and by degrees brought the poor old man into a state of debility, under which he eventually sunk and expired. At his death, a late public spirited individual, shocked at the melancholy affair, caused an inquiry into the circumstances: an inquest was called, and I received a summons from the coroner, in conjunction with Mr. Jewel, of Tregony, to attend to give our opinions upon the case. All the above facts were clearly proved, and on our testifying to the gross ignorance and negligence with which the operation was done, and the result leading indirectly to the death of the patient, the Jury returned a verdict of *Manslaughter*, and the operator was committed to take his trial at the last assizes at Bodmin. When the cause was called on, it was discovered that there was a misnomer in the coroner's inquisition, which was fatal to the proceedings, and the prisoner consequently escaped without trial.

The Judge (Baron Vaughan), apparently impressed with the mischievous nature of the case, addressed this *soi-disant* scion of royalty and physis, by cautioning him not again to venture upon his former practice, lest, by endangering the lives of other persons, he might at length peril his own.

To the very suitable address of the learned Judge he replied in the following strain:—"My Lord Judge and Gentlemen of the Jury—I have come into this country to practise, and as every body finds I can perform operations and do better than the other doctors in this county, I am called in to people, and do many cures. In this case I was sent for to the village of Cairn, to extract a tooth, *one of the dens*, my Lord Judge; and there I agreed to come again on the ensuing Wednesday to perform this operation; accordingly I came again on the ensuing Wednesday, and I performed the operation on the *pubes*."

The learned Judge here interrupted the prisoner, by asking on what part he had said he had operated?

He replied, "On the *pubes*—or *lower lip*, my Lord Judge. (Roars of laughter throughout the Court.) So because I have performed this little cure"—

The Judge: "Cure you call it, do you? to be sure the grave is a cure for most things!"

The prisoner resumed, "On account of the cures I have made, I am persecuted by some, but I will not persecute them; but I shall be ready by day or by night to attend and do good to all his Majesty's subjects; and being out of employ in the navy now, I am ready to attend all, from the nobleman in his carriage to the poor man in his cottage: so I wish you a good morning, my Lord Judge and Gentlemen of the Jury, and God save the King!"

Thus ended the case in Court of this vulgar impostor, whose ignorance, whose presumption, and whose obscurity, veiled in an appearance of mystery, for four years successfully played on the credulity of the multitude; and who, notwithstanding the above exposé, retains to this hour admirers and devotees, even among persons from whom a better judgment might be expected. True is the remark, that England is the very hothouse of empiricism; and such is the *gullability* of John Bull, that from a quart bottle conjuror to the displays of Mr. St. John Long, nothing seems too extravagant or preposterous for the capacious powers of his deglutition.

I am, Sir,

Your obedient servant,

L. S. BOYNE.

St. Mawe's, Sept. 19, 1830.

A HINT.

[For a corner in the *Medical Gazette*,—addressed to *Medical Students*.]

"BE not afraid, nor yet ashamed of your religious principles, however you keep those of politics to yourselves. It can be no disgrace for a Physician, who owns himself at all times no more than *Nature's Minister*, to acknowledge himself also the *Servant of Nature's MASTER*."

DANIEL TURNER,
When aged 72.

MEDICAL EDUCATION.

THE Society of Apothecaries, in publishing their regulations for the present season, have premised them by the following appropriate address:—

Apothecaries' Hall, London,
September 1830.

The Court of Examiners of the Society of Apothecaries of London, having occasion to revise their Rules and Regulations, embrace the opportunity of offering some remarks, which, although particularly addressed to those whose education it is the peculiar province of the Court to control and direct, cannot fail to interest the whole medical profession, as well as the public at large.

Fifteen years have now elapsed since the legislature confided to the Society of Apothecaries the administration of an act "for better regulating the practice of Apothecaries throughout England and Wales;" which, among many other salutary provisions, requires this class of medical practitioners to be skilled in the science and practice of medicine.

Prior to that period (1815) the situation of the apothecary was greatly to be deplored; no check whatever existed to prevent any man, however ignorant, from practising this branch of medicine; he too frequently presented the strange anomaly of a person without education engaged in a pursuit requiring deep research and severe study, and entrusted with the cure of the many complicated diseases of a still more complicated body, the structure of which he was either entirely ignorant of, or at the best but imperfectly acquainted with; whilst few of those who were zealous for the acquirement of knowledge had opportunity to cultivate the science effectively, since the means of instruction were neither generally nor easily to be obtained.

Fully impressed with the many difficulties that obstructed their course, the Court of Examiners felt themselves bound, for some years, to proceed with great caution in giving effect to the beneficent intentions of the legislature, urging on, slowly and deliberately, such improvements in medical education as time or circumstances appeared to warrant. In every successive alteration of their regulations, the same views have invariably continued to guide

the Court, until they find themselves at length enabled to reach a standard of education, which, though far from perfect, presents such a system of study as *may* not, for some years at least, require any essential change; a system nearly approaching to that which has long been demanded from the parallel grade of practitioners in the neighbouring country.

The Court of Examiners, in instituting the following regulations, do not by any means conceive that they are requiring the maximum of knowledge that might be expected from the Apothecary, but merely that quantity of information which the general advancement of science demands, and certainly not more than is requisite to afford a just degree of security to those whose lives are entrusted to his care, including the majority of the inhabitants of every large city in the kingdom, and the bulk of the population throughout the country.

In addition to the studies mentioned in the following pages, the Court beg seriously to impress upon parents and guardians who destine the youth under their care to the study of medicine, that a *familiar* acquaintance with the Latin language is indispensable; and that a knowledge of Greek is scarcely less so, since most of the terms of art employed in medicine and the collateral sciences, are derived from that expressive language, without a knowledge of which the pupil loses the value of much of the instruction he would otherwise receive from his teacher. Natural history may be said to be essential to the proper study of the *Materia Medica*; and an acquaintance with the *exact* sciences will not only enable the student to understand more readily the admirable structure and functions of many parts of the human frame, but also assist him materially in acquiring habits of precise and correct reasoning. He must also take into account the improving spirit of the age in which we live, and must reflect how difficult it will be for him to maintain his proper station in society, without the most strenuous exertions on his part.

Experience has shewn that youth are generally taken from their preparatory studies, and apprenticed at an age much too early. It is, therefore, of great importance that the parent who apprentices his son to an apothecary, as well

as the master who receives him, should previously ascertain that the youth has been liberally educated, and that his classical attainments, more especially, are such as enable him to pursue his subsequent studies with credit and advantage. Neither can it be too generally known, nor too often repeated, that the years of apprenticeship required by the Act of Parliament may and ought to be devoted to acquiring most of the preliminary branches of professional knowledge; so that at the termination of his five years of probation, the apprentice should have little else to do but to acquire that enlarged share of practical information which he cannot be supposed to attain during his years of pupilage.

The Court of Examiners have too much reason to know and lament, that notwithstanding all their precautions, the attendance upon lectures, and more especially that upon hospital practice, is often grossly eluded or neglected; and they deem it their duty to express a hope that the teachers of the various branches of medical science, with whom the correction of this abuse must principally rest, will turn their attention to the removal of an evil of such magnitude. It would be competent for the teachers to insist upon periodical signatures from their respective classes, proving that the pupils are actually in attendance; and it would be equally in their power entirely to withhold certificates from those who have neglected their attendance, or to qualify the testimonial in such a manner, that the court may apply to those who have been negligent that degree of rigid scrutiny which the justice of the case might appear to demand.

Another evil, which also admits of an easy and efficient remedy, is the delivery of courses of lectures on different subjects by the same teacher. It cannot be denied that such lectures are not in themselves so efficiently given, nor is the interest annexed to them in any degree so vivid, as where the pupil has an opportunity of availing himself of the varied talents, attainments, and practical experience of different individuals.

The Court of Examiners cannot too earnestly or too often endeavour to impress upon students the imperative necessity of their pursuing a systematic course of study, which time alone can

enable them to do; without it they will be compelled to rely upon some vade mecum, or other trivial work, formed to assist the idle, or the hastily educated man, instead of drinking at the fountain head of science, and acquiring their knowledge from actual and persevering research.

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Regulations to be observed by Students whose attendance on Lectures shall commence on or after the 1st of January, 1831.*

Every candidate for a certificate to practise as an apothecary, will be required to produce testimonials of having served an apprenticeship† of not less than five years to an apothecary:

Of having attained the full age‡ of twenty-one years.

Of good moral conduct§: and,

Of having devoted at least Two Years to an attendance on lectures and hospital practice.

The candidate must have attended the following courses of lectures||.

Chemistry: Two courses—each course consisting of not less than forty-five lectures.

Materia Medica and Therapeutics: Two courses—each course consisting of not less than forty-five lectures.

Anatomy and Physiology: Two courses: Of the same extent as required by the Royal College of Surgeons, of London.

Anatomical Demonstrations, do. do.

Principles and Practice of Medicine: Two courses—Each course consisting of not less than forty-five lectures, to be attended subsequently to the termination of the first course of lectures on chemistry, materia medica, and anatomy and physiology.

* Students who are at present pursuing their medical studies, and those who may begin to attend lectures at the commencement of the next medical session, (viz. October), will be received as candidates for examination by complying with the regulations heretofore published.

† The apprenticeship must have been served with a person legally qualified to practise as an apothecary, either by having been in practice prior to or on the 1st of August, 1815, or by having received a certificate of his qualification from the Court of Examiners.

‡ As evidence of age, a copy of the baptismal register will be required in every case where it can possibly be procured.

§ A testimonial of moral character from the gentleman to whom the candidate has been an apprentice, will always be more satisfactory than from any other person.

|| The lectures required in each course respectively, must be given on separate days.

Botany: One course.

Midwifery, and the Diseases of Women and Children: Two courses—To be attended during the second year.

Forensic Medicine: One course: do.

Students are moreover recommended diligently to avail themselves of instruction in morbid anatomy.

The candidate must also have attended for twelve months, at least, the physician's practice at an hospital containing not less than sixty beds, and where a course of clinical lectures is given; or for fifteen months at an hospital where in clinical lectures are not given; or for fifteen months at a dispensary* connected with some medical school recognized by the court. The whole of such attendance to be subsequent to the first year of attendance on lectures.

The testimonials of attendance on lectures, and hospital practice, must be given on a printed form, with which students may be supplied on application at the under-mentioned places. In London, at the beadle's office, at this hall. In Edinburgh, at Messrs. Mac-lachlan and Stewart's, booksellers. In Dublin, at Messrs. Hodges and Smith's, booksellers.

In the provincial towns, where there are medical schools, at the hospital, or from the teacher who keeps the register of the school.

Students are enjoined to observe that no other form of testimonial will be received; and that no attendance on lectures will qualify a candidate for examination unless the teacher is recognized by the court.

The teachers in Dublin, Edinburgh, Glasgow, and Aberdeen, recognized by the constituted medical authorities in those places respectively, are recognized by the court.

Registration.—A book† is kept at the hall of the society for the registration, at stated times, of the names of students, and the lectures, hospitals, or dispensaries they attend.

All students, in London, are required to appear personally, and to register the several classes for which they have taken

tickets; and those only will be considered to have complied with the regulations of the court whose names and classes in the register correspond with the testimonials of the teachers.

The book will be open for the registration during the first twenty-one days of the months of February, June, and October, from nine until two.

The court also require students at the provincial medical schools to register their names in their own hand-writing, and the classes they attend, with one of the teachers* in each respective school, within fourteen days from the commencement of each course of lectures, and those students only will be deemed to have complied with the regulations whose names are so registered.

Each student, at his first registration, will receive the printed form on which he is to obtain the certificates of his teachers.

Examination.—The examination of the candidate will be as follows:

1. In translating parts of Celsus de Medicinâ, or Gregory Conspectus Medicinæ Theoreticæ, Pharmacopœia Londinensis, and Physicians' Prescriptions.
2. In chemistry.
3. In materia medica and therapeutics.
4. In botany.
5. In anatomy and physiology.
6. In the practice of medicine.

Notice.—Every person offering himself for examination must give notice in writing to the clerk of the society on or before the Monday previously to the day of examination, and must also at the same time deposit all the required testimonials at the office of the beadle, where attendance is given every day, except Sunday, from nine until two o'clock.

Candidates will be admitted to examination in the order in which their names stand on the notice paper; and those neglecting to attend agreeably to their notice, will, upon a subsequent application, be placed at the bottom of the list.

By the 22d section of the act of parliament no rejected candidate can be re-admitted to be examined until the expiration of six months from his former examination.

The court meet in the hall every Thursday, where candidates are re-

* Certificates of attendance on the physician's practice at dispensaries will continue to be received until the 1st of January, 1833, from all such as have heretofore been admitted, but after that time the present regulation will be strictly adhered to.

† The book will be opened for the registration of those students whom these regulations affect, on the 1st of February, 1831.

* The students will be informed at each school, respectively, of the name of the teacher to whose care the register will be confided.

quired to attend at half-past four o'clock.

(By order of the court)

JOHN WATSON,
Secretary.

Fees.—The act directs the following sums to be paid for certificates.

For London, and within ten miles thereof, ten guineas.

For all other parts of England and Wales, six guineas.

Persons having paid the latter sum become entitled to practise in London, and within ten miles thereof, by paying four guineas in addition.

For an assistant's certificate, two guineas.

It is expressly ordered by the Court of Examiners, that no gratuity be received by any officer of the court.

Regulations of the College of Surgeons and Society of Apothecaries, applicable to Students now entering their Studies.

The *College of Surgeons* require of candidates certificates—

Of having studied Anatomy, by attendance on Lectures and Demonstrations, and by Dissections, during two anatomical seasons.

Of having attended two courses of Lectures on Surgery, each course comprising not less than sixty Lectures.

Of having attended Lectures on the Practice of Physic, on Chemistry, and on Midwifery, during six months; and on Botany and Materia Medica during three months.

Of having attended during twelve months the surgical practice of a recognised Hospital in London, Dublin, Edinburgh, Glasgow, or Aberdeen; or for six months in any one of such Hospitals, and twelve months in any properly constituted provincial Hospital, acknowledged by the Council as competent for the purposes of instruction.

Students at present pursuing their studies, or beginning to do so before the end of the present year, are required, by the *Society of Apothecaries*, to attend not less than—

Two Courses of Lectures on Chemistry.

Two Courses of Lectures on Materia Medica, Therapeutics, and Botany.

Two Courses of Lectures on Anatomy and Physiology.

Two Courses of Anatomical Demonstrations.

Two Courses of Lectures on the Theory and Practice of Medicine: to be attended subsequently to one Course of Lectures on Chemistry, Materia Medica, and Anatomy.

Two Courses of Lectures on Midwifery and the Diseases of Women and Children.

And nine months, at least, the Physician's Practice at a Hospital (containing not less than sixty beds), or twelve months at a Dispensary; such attendance to commence subsequently to the termination of the first Course of Lectures on the Principles and Practice of Medicine.

LONDON UNIVERSITY DIPLOMA.

To the Editor of the London Medical Gazette.

SIR,

I FIND by a prospectus published by the London University, that it is intended to grant diplomas, giving the name of "Master of Medicine and Surgery, so that the person obtaining it can affix it to his name and be called by it, as is the case when he takes a degree at an incorporated University;" from which, I conceive, pupils are led to infer that it is not necessary for going into practice as a general practitioner, that they should obtain any other diploma. Now, sir, you know perfectly well that such is not the fact, it being absolutely necessary that they should obtain the diploma of the Society of Apothecaries.

It appears to me of importance that students should be made acquainted with this, otherwise if they were to go into practice with the certificate from the London University only, they would be liable to be prevented from practising by the medical men in the neighbourhood, and likewise, I believe, to prosecution by the Society of Apothecaries. I hope you will not suppose from what I have said, that I am an enemy to the London University—far from it; but as to granting a diploma authorising the possessor of it to practise as a general

practitioner, I am sure they have not the least power.

If you should deem this little communication of sufficient importance for insertion, you will greatly oblige me by giving it a corner in your very useful publication.—I remain,

Your obedient servant,

A GENERAL PRACTITIONER.

Lambeth, Sept. 23. 1830.

ANALYSES & NOTICES OF BOOKS.

“L'Auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

The Laws relating to the Medical Profession; with an Account of the Rise and Progress of its various Orders.

By J. W. WILLCOCK, Esq. Barrister at Law.

A BOOK of this description has long been a desideratum both in the medical profession and the legal. It has long been desirable that the medical man should be concisely and well-informed as to the nature and extent of the privileges conferred on him by his rank in society—that he should be acquainted with the ground and origin of those privileges—and, in short, how far, and no farther, he is entitled to immunities and exemptions, and to the peculiar protection of the state; while the lawyer, whose duty it is to search out fundamental sources, and to trace those privileges to their origin, has in numerous instances of late found himself bewildered by the scattered and apparently conflicting documents and legal decisions on record relating to the healing art. The profession is undoubtedly much altered, in its external as well as internal circumstances, since the middle of the last century, when the learned Blackstone wrote, and said, “For the gentlemen of the faculty of physie, I must frankly own that I see no special reason why they in particular should apply themselves to the study of the law, unless in common with other gentlemen, and to complete the character of general and extensive knowledge; a character which their profession, beyond others, has remarkably deserved.” How little did he anticipate the frequent

scenes of litigation that were speedily to ensue, and to go on flourishing with perennial vigour ever since! The King *versus* the College, in Fothergill and Archer's case; Dr. Letch's case; Rex *v.* Askew and other Censors; Stranger's case—Schomburg's—and latterly Harrison's. These are but a few of those which have since occurred between various parties and the College of Physicians; while it would be tedious and needless to enumerate a title of the actions which have been tried within the same period, relating to the liabilities and remuneration of medical practitioners. To what this increasing appetite for legal interference is to be chiefly attributed, we will not pretend to say; but there may be something in the improved taste for the study of the law generated by the labours of the learned commentator himself. Then, again, how little was there known in his time, in this country, of the science since so familiar to us by the name of forensic, or legal medicine! But our attention must, for the present, be principally directed to that portion of the law of the land which is *externally* applicable to the profession; that by which its rights and privileges are protected, the pretensions of the unqualified restrained, and the malpractices of charlatans visited with punishment. A work within a moderate compass, combining all that was essentially necessary to be known on these important topics, was, as we have said, long a desideratum; and never, perhaps, more than in some very recent instances, has this want been felt. We have lately seen how far the ends of justice may be mocked and trifled with, and almost defeated—on a solemn question too—by an impudent interpreter, or prevaricator rather, of the law, unchecked by the fear of immediate detection, quoting partial cases, plausibly selected or invented for his own purposes; while the medical men present, as well indeed as the public generally, though sensibly aggrieved by those misrepresentations, and persuaded in their own minds that all was not right, were yet unable to contradict and silence their frontless adversary from a lack of that legal literature to which we now more particularly allude. With the exception of the introductory matter in Paris and Foublanque's voluminous production, the first part of which treats of the

powers and capacities of the medical corporations (a brief and superficial statement after all), there has been nothing hitherto published with such a special reference—no distinct work, certainly, on the subject. Mr. Willcock, therefore, comes before us without a rival or a predecessor. His book is emphatically new. He undertakes to supply both the lay professions with a magazine of knowledge which they cannot any longer well dispense with; and in the compilation of such a work (for it must mainly be a compilation) we are both gratified and surprised by the display of so much originality and freedom of discussion. The second part (the work is divided into two) comprises, as our readers should be informed, the charters, statutes, and decided cases which are on record relating to the medical profession in its three-fold capacity, while the first forms a most interesting and valuable digest of those documents. To this latter part alone we wish, for the present, to call the reader's attention. It is divided into ten chapters, under the following titles: 1. Ancient Orders of the Medical Profession. 2. Present Orders of the Medical Profession. 3. Unqualified Practitioners in Medicine. 4. Malpractice in Medicine. 5. Civil Responsibility of Medical Practitioners. 6. Remuneration of Medical Practitioners. 7. Protection of Medical Men. 8. Privileges of Medical Men. 9. Contagious Diseases; and 10. On Dissection.

The first chapter abounds with curious antiquarian research: it does not occupy an inordinately large portion of the volume certainly, but it must be confessed that it contains more matter of curiosity than of utility; not that we are such utilitarians as to grudge a few pages to our old friends the Druids and Bards, the Alchemists, Sorcerers, Jews, and Astrologers, especially when grouped into a seductive band to beckon us on to graver occupations. We shall, however, only take occasion here to select from the historical notices one or two facts relating to the first appearance of regular medical practitioners in Britain. Much confusion had arisen, it seems, from the absence of any effective restraint on the practice of self-appointed persons; nor could the English Colleges of their own authority prevent any from undertaking to practise, though they had not obtained a degree. On

this account, therefore, in the ninth year of the reign of Henry V. (A.D. 1422) our Universities proposed to pass an Act of Parliament for the purpose of excluding every one from the practice of physic who had not taken the degree of Bachelor of Medicine, either at Oxford or Cambridge, under the penalty of 40*l.* and imprisonment, whether man or woman. By this they hoped to ascertain who should "use the mysterie of fysyk." But it does not appear that this measure was attended with the desired effect; it probably never passed into a regular Act of Parliament: however that may be, in the 3d year of the reign of Henry VIII. was passed an Act which is generally received as the first operative law on the subject, and which takes no notice of the preceding supposed statute. By this, which is especially aimed against the sorcerers, witches, and smiths, weavers and women, "who can no letters in the book;" provision is made both as to sufficiency of learning and purity from supernatural attainments, by appointing the Bishop of the diocese to exorcise the fiend, and two Doctors to examine the medical qualifications of the candidate. In the 14th year of the same reign (1522) another Act was passed, relative to physicians only; by which, inasmuch as they were concerned, the examination was taken from the persons appointed for that purpose by the former statute, and reposed in the College instituted by a charter of that king. Under this the University graduates who might desire to practise in London were included, as well as the other physicians; and since that time the legislature has seldom interfered on the subject.

We now pass on to the second chapter, which more properly commences the business of the volume; and here our author, after dividing his subject into three portions, relating to physicians, to surgeons, and to apothecaries (a method which is pursued in almost every chapter), enters upon the powers, privileges, and arrangements of the College of Physicians. The obnoxious bye-law which was made in or about the year 1768, declaring "that no person should be admitted to the order of candidates unless he had been created a doctor of physic in the University of Oxford or Cambridge, or having obtained that degree in the University of Dublin, been incorporated into the Uni-

versity of Oxford or Cambridge, and until he had been examined as to his knowledge of physic at three of the great or lesser meetings of the College"—is discussed by Mr. Willcock with much ability. We shall extract some of his arguments, by way of specimen of the tone in which the work is composed: for the liberality of opinion which it advocates we profess the utmost respect; but we reserve to ourselves the right of debating with him some of his positions, on a future occasion. "The statute," says Mr. Willcock, alluding to that of 32 Henry VIII. c. 40, "rendered all men of the faculty, of and in London, eligible to the fellowship. The bye-law says, all men of the faculty of and in London are not eligible: those only are eligible who have been of the order of candidates for one year; and none can become candidates who are not graduates of Oxford or Cambridge. This is directly in the teeth of the statute: it is the imposing of a qualification not required by the constitution; and what is most fatal to such a qualification, one which does not depend upon the body imposing it, or any select portion of that body, but on two Universities in legal acceptance strangers to, and unconnected with, this College, and wholly overlooked by the statute by which it was established.

"Lord Mansfield was clear that some of the bye-laws were bad. Lord Kenyon says that Lord Mansfield could not refer to these bye-laws; yet self-evident it must be to every one who can read, that these were the very bye-laws against which Lord Mansfield directed his observation. These were the most illiberal bye-laws; the others were mitigations of them: these were the bye-laws which had nothing to do with the extent of education, but with the place in which the party might happen to have been educated. A Judge is ever to be suspected who can so far forget himself as to glory in his prejudice. The sarcasm of Lord Holt, the most intrepid and upright of judges, is singularly applicable to Lord Kenyon:—"It is strange that he should have fallen into the absurdities of Coke after his master had been so lashed for his folly."

"It is evident that the statute did not contemplate any examination as preliminary to adoption into the society, otherwise they would have mentioned it;

for where they contemplated examination they required it. They deemed an examination of the licentiates necessary, and no one could be of the body (except the original members) until he had been a licentiate; therefore they required that the licentiate should receive letters testimonial: they deemed an examination necessary for those from among whom the president was to be elected, therefore they required it; and they deemed it expedient that country practitioners should be examined, and omitted not to require that they should be examined. But an examination of already approved physicians, as a preliminary to their eligibility to the fellowship, the legislature justly thought superfluous, and therefore did not require it.

"With regard to the mode of examination, none is pointed out; but it is required that London licentiates should have the testimonial of the College, and that country practitioners should have the testimonial of the president and three elects; and the preamble of the third section describes, in the quaint language of the times, the necessary qualification of physicians, for a commentary on which it is sufficient to refer to the equally quaint explanation by Lord Coke.

"The examination is to secure the health of the people against the ignorance, rashness, and folly of uneducated physicians; this, therefore, can have relation to the license alone, and not to the distinguishing office of the fellows. If any peculiar qualification be necessary for that office, it would be a general acquaintance with the manners of medical men, a reputation for superiority among the other members of his profession, and that knowledge of the world which might render him particularly capable of judging of the rules necessary for the regulation of the conduct of medical practitioners. If an examination on these qualifications be desirable, it is for the fellows themselves to judge of the candidate's pretensions. The circumstance of his having spent his time on the banks of the Cam or Isis, of his having inhabited the Gothic cells of the English universities, or even of his having studied the antiquated statutes of these institutions, afford no proof of his acquirements in this respect. The more reasonable ground of

admission would surely be, that the fellows have long observed his practice and conduct in the course of his professional career, and that the majority has, from such observation, been induced to consider him peculiarly qualified to become an example to his brethren, and to take a share in the "oversight and correction of the men of the faculty within the precinct of London."

"The reliance placed on the ordinance which rendered licentiates, under certain circumstances, eligible to the fellowship, can be regarded only as a mere subterfuge; for that, as far as it relates to the extraordinary qualification required, is equally objectionable with the other bye-laws. The original act of incorporation gave the fellows an unrestricted right of electing whom they might think proper. It was competent to the fellows, at any time, to appoint a convenient mode of exercising that right, but they could not restrain either their successors or themselves to the exercise of it in respect of particular persons only, to the exclusion of others not excluded by the charter or statute.

"The result of the cases relative to this and all other corporations is, that the fellows alone may elect into their number any persons they may feel disposed thus to distinguish, unrestrained by their constitution, except in respect of the profession of the elected, and wholly unrestrained by the bye-laws, which are null and void: the election must be at a corporate meeting, either on a day on which it is customary to make such elections, or on any other day, after notice of the object and time of the meeting to each of the fellows then residing within the precinct of London: and no person has, or can, by any bye-law or regulation of the college, acquire any inchoate right of admission into this order.

"The fellows have not, indeed, repealed the invidious bye-law, but they have lately admitted several licentiates into their association; and it may be reasonably expected that the jealousy which has for a long time disturbed the harmony of that highly respectable profession, will gradually abate, until at length the manners, virtue, and talents of the man will be deemed in him a higher recommendation to the good opinion of his competitors, than the mere circumstance of his having

cultivated these talents within the walls of certain buildings, or on the banks of a certain river."

[To be continued.]

MEDICAL GAZETTE.

Saturday, October 2, 1830.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

PRESENT STATE OF THE LONDON AND PARIS SCHOOLS OF MEDICINE.

AT the commencement of a new volume and a new session, perhaps we cannot employ a short space better than in taking a brief contemplative survey of the aspect of the period: nor do we know any thing more immediately interesting, or better calculated to form a subject of congratulation with our readers, than the appearance of complete appointment which this great metropolis presents at this moment for carrying on the winter campaign with vigour and success. In no city in the world, it may be truly said, are there such advantages for the pursuit of medical study as in London. The superiority which it enjoys in possessing the most eminent professors of every branch of medicine and surgery, is greatly enhanced by its university-like disposition into a large number of minor establishments, all under the independent control of teachers of established character, actuated by the strong impulse of emulation and honourable competition. This peculiarity in our arrangements for medical education was indeed noticed by M. Roux, several years ago, as a point of striking contrast between the schools of London and Paris. "In London," writes this intelligent observer, "the public teaching is scarcely any thing, and the private teaching every thing.

Of the different establishments destined for this latter purpose, some are not connected with the hospitals, others (which are the principal) exist in the hospitals themselves. It is within their walls, and by the principal physicians and surgeons of them, that the chief private courses are given; so, as I have said before, the most considerable hospitals of London are so many particular schools, altogether free and independent of each other—rivalling one another at the same time in zeal and activity.” And the improvements since these remarks were made have been commensurate with all that the most sanguine admirer of “free trade and no monopoly” could wish. The schools and the number of hands employed have been increased considerably—wherever machinery could be introduced with good effect, it was done—and we may go farther and say, that the demand for labour has not been diminished—nay perhaps, on the whole, augmented*.

With these facts before us, we cannot think any apology necessary for thus adverting to them briefly; the more so, as we apprehend there are those who, from a telescopic property belonging to their nature, overlook advantages within their reach, while they fly to others that they know not of. The Parisian school, for instance, is frequently held up to our admiration. Perhaps a glance at the present state of the French capital in a medical point of view, may not be without its use at the present moment. It is an old maxim, though somewhat discreditable to our neighbourly benevolence, that there is something in the misfortune even of our best friends not displeasing to us. We will not, indeed,

say that there is any thing in the brief narrative which we intend to lay before the reader, *pleasing* to us, but it may be *profitable* nevertheless. One thing we may gain at all events—to be the better enabled to set a value upon our own establishments, by making ourselves better acquainted with those of another and a rival nation.

It may be stated, then, at once, and without circumlocution, that the greatest disorder exists among the faculty at Paris. The great changes which have recently occurred in that capital have not been confined in their operation to the establishment of a new order of things in the political world; the spirit of revolution and reform seems to have diffused itself into every department of the social compact in the kingdom of France. In the medical institutions, therefore, we need not be surprised to find that alterations of a most important character have been adopted, or are in contemplation; in fact, a complete reorganization of the *Faculté de Médecine* is on the tapis. It cannot have been unknown to most of our readers, that the great body of the profession in Paris have long been dissatisfied with the manner in which the professorships in the *Ecole de Médecine* have been filled, more particularly during the last seven years; that the new faculty, as it was called, has been always unpopular; that the original and favourite mode of appointment by the *Concours* has been for some time abandoned; and that, in fine, the ministerial regulations of 1823, under the name of the *Ordonnance Corbière*, have been in the highest degree offensive and odious. So despotic an act certainly as that which was the first result of the *Ordonnance* in question, cannot readily be found on record. “At one fell swoop” to clear the chairs of the distinguished men who filled them—the Desgenettes, the Chaussiers, the Dubois,

* We reckon no less than eight large hospitals from which we have seen affiches and advertisements this season relative to their educational arrangements—viz. St. Bartholomew's, St. Thomas's, Guy's, St. George's, the London, Middlesex, Westminster, and the London Fever; and from the Schools, the London University, Webb-street, Aldersgate-street, Windmill-street, and six-and-thirty others!

the Pelletans, and the Pinels; and to put in their places such unheard-of persons as MM. Fizeau, Deneux, Clarrion, Guilbert, and the like, must be allowed to have been a very arbitrary exercise of political violence. It was an actual *coup d'état* similar to that of the 26th of July; an attempt (more successful, indeed, than the latter) to suppress every thing liberal and of good repute, in order to substitute for it all that was servile, feeble, and obscure. But it was an act not to be forgotten; at least a few short years could not bury it in oblivion; and when the time of retribution came, it was one of the earliest projects agitated, upon the downfall of the late dynasty, to restore the former order of things in the school of medicine. The profession rose in a body, to profit by the political changes, and to rid themselves of the incubus under which they laboured so long. A requisition, signed by 1500 names, called upon the minister to reorganize the faculty and to repeal the *ordonnance Corbière*. M. de Broglie readily acceded to the first part of their demand; that there should be reorganization he saw was a matter of absolute necessity, and the measure which he adopted in consequence was liberal and fair. A commission of inquiry was appointed, consisting of eight members, with the Baron Cuvier at their head; but most probably if as many Areopagites were chosen, with an archangel at their head, it would not have given satisfaction to all. We shall hear what one of the medical journals of the French metropolis says upon it; and it seems to speak the sentiments of the majority of the malcontents. "A commission has been instituted to inquire into the best mode of reorganizing the faculty; the members are named, and, to crown the work, M. le Baron Cuvier is appointed president. We must be permitted to say, and it is not we alone who say it, that pity and indignation are the feelings

generally excited by the announcement of this news. We must be allowed to say more—the minister has, in this instance, been deficient in his duty; there was a departure from the just course of laws—it should have been his first care to recover the proper path. Had he boldly and at once annulled the *ordonnance Corbière*, there had been no room for discontent; he would have escaped the suspicion of intrigue, and of having betrayed the interests of the state and the duties of his office. The *ordonnances* of the 26th of July were not more illegal than the *ordonnance* which disorganized the school, and which, like the former, violated the laws of the constitution, on which the security, independence, and dignity of the professors, as well as the interest of the pupils, were grounded. Those *ordonnances* of July were not obeyed; rebellion was a duty, and unanimous applause crowned the efforts of those heroes who saved us from despotism. Neither shall the *ordonnance Corbière* be obeyed; founded neither in right nor justice, the authority which revokes it not is liable to censure*." Such is the strain in which this writer proceeds: we shall not follow him further, but merely observe that his political prejudices seem to have carried him far beyond the bounds of moderation; especially when we find him directly charging M. Cuvier with being "a man of all dynasties and all slaveries;—the very individual who prepared the offensive *ordonnance*; who first conceived the *agregat*; who discounted the *concours*; who stifled the liberty of public instruction;—the man, in fine, who had done what ought to be undone." And this, we regret to say, is the tone in which the whole argument is conducted.

The commission, meanwhile, proceeds with its duties, and the principal objects of its consideration seem to be

* La Lancette Française.

these—to ascertain the propriety of repealing the *ordonnance Corbière*, the best method of filling up the vacancies which will thereupon ensue, and, lastly, to render the school more complete than it ever has been. It should have been mentioned that, previous to the imposition of the obnoxious ordinance, the *Ecole de Médecine* was regulated by an imperial decree of 1808; an instrument having all the validity and sanction of law, and productive of the most beneficial effects to the interests of the establishment. On the other hand, the ordinance which went to displace this decree was virtually illegal, and as arbitrary as those state measures which produced the late convulsion. The consequences, too, should undoubtedly have been similar, had the pretended regulation of the *Ecole* a bearing more extensive; a circumstance which is far from being palliative of its demerits. Its atrocity, in fact, was equal, though its manifestation was on a smaller scale.

As a consequence of the intended repeal, the chairs are not necessarily vacant; they should belong to their former possessors. But where are they? Some of them in their graves, the rest disqualified for the business of teaching, by reason of their age and the lengthened intermission of their duty. The simple repeal, then, of the ordinance, is not all that will be required; measures must also be taken to see that the chairs be properly filled. Some are for the much-admired mode of appointing by the *concours*; others for the less complicated, and perhaps equally honest method, of *election*; while all are at a loss what is to be done with the old professors of the *faculté*. In such a state of things, the difficulty of coming to any final arrangement, satisfactory to all parties, is extreme; although the popularity of the minister—the Duke de Broglie—and the integrity of the Baron Cuvier, which ought to be a

sufficient guarantee for the goodness of their intentions and ability to execute them, are risked upon the result.

The notice we have here thought proper to take, and at some length, of the Parisian school, must not be deemed irrelevant. As a mere piece of medical news it is interesting; but we conceive it to be more—it is valuable, as it illustrates by strong contrast the tranquil and steady condition of our own faculty at the present moment. In a general point of view, indeed, no two systems can be more opposed—more strikingly contrasted in character. While we here enjoy all the facilities of instruction and mutual co-operation that zeal and competition can supply—with all that freedom and independence so characteristic of the nation—the French faculty are entirely under the controul of government; in fact, under the surveillance of the police. In every department of medical instruction in the French capital, the government regulations are paramount—the schools are part and parcel of the machinery of the state, and affected by every fluctuation of political party. Politics are intimately connected with their proceedings, and the minds of the pupils are known not to be confined to medical meditations alone. Hence those ebullitions of excitement exhibited but too often by the Parisian students. In their late petition to the legislature for a reorganization of the *faculté*, they even went so far as to rest their chief claim to a hearing upon the fact of their having shed their blood in the revolutionary conflict of the three days—upon their having, in short, purchased at the risk of their lives the right of demanding a reformation in the school. We must confess we see not much in this to admire; it was very well for French feeling, no doubt; but it goes quite beyond the latitude of our English notions. We are simple enough—or national enough, perhaps—to set a higher value

upon the order and decorum which prevail in our own establishments—that steady and respectful tranquillity and attention to business which are never disturbed except when designing knaves contrive to mislead the unwary. In very few instances, indeed, has it ever been our misfortune to observe a want of order among the students of this great metropolis; never, but when some ill-feeling has been artfully excited by the machinations of a professional agitator. The remark is not uncalled for at the present moment, when the same spirit of evil has declared itself in the shape of an “adviser” of the pupils—whose principal and most wholesome council is to keep a strict watch upon the conduct of their instructors. But the counter-charm to these insidious advices must be obvious to every right-minded attendant of the schools; even the most simple student must perceive that he has other duties to attend to besides scrutinizing the conduct of his teacher, and setting himself up as a censor over the chair from which he is to be instructed; and if, on looking around him, he should discern a scion of the Parisian school—or any one who acts up to the very spirit of the self-constituted Mentor of the medical pupils, let him reflect whether the kind of notoriety which these persons have acquired is one which should tempt him into the same course—or whether it should not rather be looked upon as a beacon to warn him of the rocks on which the reputation of others has been wrecked.

LONDON UNIVERSITY—AMOUNT OF FEES.

WE have recently directed attention to a subject of considerable importance to pupils, and those who bear the expense of their education, namely, the comparative amount of fees at different medical schools in the metropolis. The notice which we published in our No. for September 11th was furnished by a

correspondent, who authenticated the statement by privately sending us his name: we find, however, that having been drawn up according to the prospectus of last year, it was incorrect, and although it made the expense at the London University greater in some respects than it is, yet, in point of fact, it made the total amount of fees exceed that of the other schools in a less degree than it actually does. Notwithstanding this circumstance, however, some one interested in the University very injudiciously stepped forward in its defence, and addressed to us an anonymous letter, signed “A Professor in the Medical School of the University of London,” in which he made a calculation—not as our correspondent had done—of the expense of the Lectures necessary for the College of Surgeons, but of the expense of perpetual tickets. We have no objection to any comparison which is calculated to elucidate the truth; but as we found on looking at this estimate (*which, we beg to say, was not authenticated by any signature*) that by some singular accident the writer had selected for comparison the most expensive Hospital School in London, and not content with this, had actually over-stated the amount of fees which are there required, while he calculated the University fees at the reduced rate applicable to those who have nominations, made the fee for one of the classes less than is stated in the prospectus, and altogether omitted the fees for clinical lectures,—we say, that observing these errors, we thought it sufficient to insert a notice, that some inaccuracies in our former table had been pointed out, and that we should return to the subject in a future number. Not satisfied with this proceeding, the impatient “Professor” has published a letter containing his own incorrect representation of the fees at the University as compared to other schools, and in which he asserts that we had refused to give insertion to

the contradiction of an erroneous statement, although “authenticated by the signature of one of the medical professors.” It might be enough for us to answer, that we were not called upon to publish a misrepresentation of the facts to serve the purpose of any man, whether so “authenticated” or not; but the truth is, that no signature was appended to the communication transmitted to us. We lament to find that there is any one connected with the University capable of attempting to attract pupils by practising so unworthy a deception, or audacious enough to hazard so unwarrantable an assertion. The writer can only escape the charge of wilful misrepresentation by pleading guilty to that of ignorance of the subject which he discusses. He does not even give the fees at the University correctly,—but the mistake is in its favour; he errs in his estimate of the hospital school (Guy’s),—but the mistake is against it. He states that the fees for lectures “do not materially differ” at the various hospitals, whereas the difference be-

tween some of them exceeds twenty-two pounds. In fact, the only point that gives a shadow of colouring to the representation of the “Professor,” is an appeal to the number of hours occupied by each lecturer, which is in favour of the University with regard to most, but not all the courses. To one of the most important branches—for example, that of surgery—only two hours a week are allotted; while, with respect to the others, it appears to us a very great disadvantage to the pupil that no interval should be allowed for relaxation, but that he should have to pass from lecture-room to lecture-room in such rapid succession that there is no small risk of the subjects being reflected on his mind in a form as evanescent as the moving scenery of a Christmas pantomime. At all events, if the Professor wished to measure lectures by the quantity, or estimate their value according to the time they occupied, it would have been better not to have instituted his comparison between two “perpetuals.”

Table shewing the Amount of Fees paid for Perpetual Tickets to the Medical Classes at the different Hospital Schools in London, and at the London University.

	Anatomy, Physiology, and Dissections.	Practice of Physic.	Surgery.	Chemistry.	Materia Medica and Medical Botany.	Midwifery.	Clinical Medicine.	Surgery.	Matriculation.	Additional per centage on those who have not a nomination.	Total.
	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
St. Thomas's	10 10	6 6	5 5	6 6	4 4	5 5	gratis	gratis	....	....	37 16
St. George's	16 16*	6 6	5 5	8 8‡	6 6	5 5	do.	do.	....	....	48 6
London	21 0	7 7	gratis†	8 8	4 4	8 8	do.	do.	....	....	49 7
St. Bartholomew's	21 0	7 7	8 8	8 8	gratis	8 8	do.	do.	....	....	52 11
Guy's	23 2	8 8	5 5	8 8	4 4	10 10	do.	do.	....	....	59 17
University	23 0	9 0	4 0	10 0	9 0	7 0	4 0		2 0	4 10	72 10

* The average fee for anatomy at the west end of the town.

† Viz. by Messrs. Brande and Faraday, at the Royal Institution.

‡ Where lectures are stated to be gratis, it is

in consequence of the ticket being presented to the pupils who attended certain other courses; for example, at the London Hospital, those who take out perpetual tickets to anatomy, pay nothing for surgery.

From the above table it appears, *that without making any allowance for clinical surgery*, which, owing to Mr. Bell's resignation, is omitted in the prospectus, a pupil at the University who has not the good fortune to procure a nomination, pays for the same privileges 12l. 13s. more than at Guy's; 19l. 19s. more than at St. Bartholomew's; 23l. 3s. more than at the London; 24l. 4s. more than at St. George's; and 34l. 14s. more than at St. Thomas's.

MEDICAL SCHOOL IN EGYPT.

DR. CLOT, a Frenchman, who is at the head of the medical department of the Viceroy of Egypt, has recently founded a medical school at Abou-Zabel, a few miles from Cairo. Many obstacles presented themselves to this undertaking; one of the most important of which was the difficulty of establishing the means of communication between the pupils and their masters,—the young Arabs being ignorant of the European languages, and the teachers knowing little or nothing of Arabic. This being surmounted by a Mr. Ucelli instructing the Arabs in French as a preliminary step, religious scruples next presented themselves, and gave rise to many conferences with the native priests. Fortunately, the result was to convince them that the study of anatomy was no profanation of the dead, while it contributed essentially to the preservation of the living. Permission was obtained to prosecute dissections with discretion, and the dislike of the pupils to the dead bodies being soon subdued, dissections are now carried on in Egypt with as much freedom as in Europe.

POISONING WITH SULPHURIC ACID.

SULPHURIC acid is one of the means occasionally, though rarely, adopted for the purpose of self-destruction. An instance in which it was had recourse to lately occurred at La Charité, in Paris, and contains some points of interest. A young woman, between twenty-

five and thirty years of age, had become pregnant four or five months before, and was abandoned by her seducer; she procured some sulphuric acid and swallowed it. A large quantity of white of egg was immediately administered, and then magnesia in powder. The symptoms, however, continued unabated, and she was carried to the hospital, where the most active antiphlogistic means were adopted without avail. Burning heat of the mouth, pharynx, and œsophagus, severe colic and repeated vomiting, with constipation, continued till the fifth day, when she expired.

The body was examined twenty-four hours after death. The lips, palate, tongue, and inside of the cheeks, were covered with a whitish pellicle, which at some points was raised in the form of vesicles. The epiglottis, and even the glottis, exhibited the same appearance. The mucous membrane of the œsophagus was lined with a greyish pultaceous covering, which being removed, left the muscular fibres bare. The same appearance was observable in the stomach. The veins contained black and half solidified blood. These appearances suddenly ceased at the pylorus, which itself was uninjured. The only morbid appearance in the intestinal canal was some increased vascularity at various points.

Blackness of the parts with which it has come in contact is given as one of the marks of poisoning with sulphuric acid; but this is only present at the commencement, for the surfaces soon change colour, becoming white, yellow, or grey. As to the reputed antidotes, such as albumen and magnesia, they can only neutralize any acid which may still remain free in the stomach; but the concentrated acid itself acts on the tissues the moment it comes in contact with them, and it is doubtful whether an individual ever swallows so much as to leave any to be thus acted upon by chemical agents taken into the stomach. Thus antiphlogistic remedies afford the only rational prospect of benefit; and this, unfortunately, but is a very small one.

Although sulphuric acid is seldom employed for the purposes of assassination, or of suicide, it has recently been frequently used for the malicious purpose of disfiguring and maiming the countenance; a crime, indeed, which

was so often repeated that, a few years ago, it was made a capital offence. Not less than five cases of this description have been mentioned in the newspapers in the course of the present year.

PERIOD OF PUBERTY IN WOMEN.

MANY years ago I was consulted in the case of two sisters, the one seventeen, and the other eighteen years of age, who, though apparently in health, were supposed to be suffering from retention of the menses, for which they had been taking some popular herb medicines. They were tall, more than commonly muscular, of a blooming healthy hue, and without any sign of enlargement of the mammæ. In other respects their appearance was perfectly feminine. Finding that they had no symptom of disease, I recommended that they should desist from medicine, on the ground that, to all appearance, they had not yet arrived at puberty, although in age they had certainly passed what is considered to be its usual period. Instances of an opposite description afterwards came under my notice. In one, where a girl menstruated at twelve, her mother and grandmother had, I found, become regular at the same age. In another, five sisters in one family menstruated at the age of eleven. These, and other cases in no respect morbid or irregular, but perfectly in the order of nature, led me to doubt whether the period of puberty was nearly so uniform as we are taught in books to consider it. This doubt, which may often have occurred to others, induced me to institute an investigation of the subject at the Board of the Lying-in Hospital of this town. The result appears in the table which follows. The question as to the age at which they began to menstruate, was put indiscriminately to a certain number of the pregnant married women, on their coming to the hospital to deliver in their letters of recommendation as home-patients. These women are generally in health, as appears by their walking, in an advanced stage of gestation, from considerable distances to the hospital, the remote situation of which, is in the highest degree inconvenient to such patients, they being chiefly inhabitants of our widely extended and scattered

suburbs. The circumstance of pregnancy is a guarantee, as regards the whole of the cases examined, of exemption from serious disease of the generative system. Owing to the great number of females who resort thither weekly affording abundant source for inquiry, no hesitation was felt at rejecting every answer which evinced either a doubtful recollection of the fact, or that the information was reluctantly afforded*. I may therefore affirm, that this table furnishes as accurate data as the nature of such an inquiry allows. And let it be remembered, that concerning the catamenial sign of puberty the word of the woman herself is, on any extended scale of investigation, the only testimony to be obtained.

The following are the ages at which three hundred and twenty-six women began to have the catamenia.

Table.

In their 11th year	6	In their 16th year	54
... .. 12th... ..	12	... .. 17th.....	50
... .. 13th.....	31	... .. 18th.....	19
... .. 14th.....	60	... .. 19th.....	18
... .. 15th.....	72	... .. 20th.....	4

One very obvious corollary I would draw from this table, namely, that the natural period of puberty in women occurs in a much more extended range of ages, and is more equally distributed throughout that range, than authors have alleged. And another, which claims particular attention, is, that did religion and our social institutions permit and encourage, in England, that early and unrestrained intercourse between the sexes, which, with the sanction of both, obtains in eastern and in almost all intertropical countries, it is to be supposed that we should witness instances amongst us of women becoming mothers at as early ages as eleven, twelve, and thirteen years. Other inferences that might be deduced from the table, I leave to the reader's ingenuity, as they would be foreign to the scope of my inquiry.—*Mr. Robertson, in North of England Med. and Surg. Journal.*

* Perhaps it ought to be mentioned that the question relating to the period of puberty was put to each of the women along with other questions usual on the occasion, as, concerning the age, the occupation, the number of children, &c.; so that it did not appear as if put out of curiosity, or for a private end, but as one of the queries necessary to be answered, in order to her admission as a patient.

MEDICAL PROVIDENT INSTITUTION
OF SCOTLAND.

IN our number for February 6th, 1830, we published a circular of this institution, to which we would refer our readers for a detailed account of the benefits which it holds out to the profession. The fourth anniversary of the institution was held in the beginning of June, when a report of the Directors for the past year, and other interesting information, were laid before the meeting. It was at the same time unanimously resolved, on the recommendation of the Directors, to throw open the benefits of the institution to the families and relatives of the members of the medical profession, thus enabling them to make provision in this institution against the casualties and contingencies of life, not only for themselves, but for those in whose welfare they are most deeply interested.

The principle of this institution is that of mutual assurance; its funds arise solely from the contributions of the members, and belong entirely to them; and by an article in the conditions, "Every five years the affairs of the institution shall be brought to a balance, and two-thirds of the surplus divided among the contributors, and the remaining one-third carried forward as a guarantee, and to meet any extraordinary contingencies."

REPORTS OF CASES OCCURRING
AT PUBLIC INSTITUTIONS.

EDINBURGH ROYAL INFIRMARY.

*Fracture of Pelvis, causing Puncture of
Bladder.*

PETER HEYNE, æt. circiter 12, admitted under the care of Mr. Liston Sept. 15th.

The skin is abraded over the crest of the left ilium, and the integuments are much discoloured on the inside of both thighs, on the nates, and on the outer side of the right thigh. The abdomen is much distended, and extremely painful on pressure; countenance anxious; pulse small, hard, and frequent; slight hiccough; extremities cold. The injury had been caused on the 15th by a coal-wagon, but he could give no distinct account of the circumstances. He had fallen asleep on the railway, and whether the wagon was loaded or empty, and whether it passed over his body or not, he could not

tell. From the time of the injury till his admission, a period of sixty hours, he had no evacuation from either the bladder or rectum.

A catheter was immediately introduced, but not more than half an ounce of bloody urine escaped. An enema was administered; a free alvine evacuation was thereby procured, and the tension of the abdomen was considerably relieved. Warmth was applied to the feet, and the abdomen was leeches and fomented. The pain continued unabated; the hiccough increased, and became accompanied with vomiting of dark-coloured matter. The vomiting, attended with parching thirst, recurred at intervals until 9 A.M. on the 16th, when he expired.

On dissection, the small intestines were found covered with a slight inflammatory blush. The os pubis was fractured transversely, close to the acetabulum; the edge of the fracture was sharp and rough, and a pointed fragment which projected inwards had penetrated the coats of the bladder at its anterior and lower part. Urine had been in consequence extravasated, and the loose cellular tissue of the pelvis around the aperture presented the peculiar sloughing characters which always follow urinary infiltration. The bladder was not distended. Much blood was effused amongst the muscles of the discoloured parts in the thighs and nates, and also in the neighbourhood of the fracture.

*Dislocation of the Hip, reduced more than a
month after the accident.*

Mrs. McEwen, æt. 23, admitted under the care of Mr. Liston, July 5th.

The right lower extremity is shorter than the left by more than two inches; the toes are turned inwards, and the knee rests on the inner and lower part of the left thigh. The patient can move the limb freely forwards and inwards, but motion outwards and backwards is extremely limited, and attended with much pain. The head of the right femur can be distinctly felt lying on the dorsum ilii, and the trochanter major is placed near the anterior superior spinous process of the ilium. The hip and thigh are painful and much swollen, and are occasionally the seat of lancinating pain.

States that the limb acquired its present position upwards of a month ago, in consequence of its being pulled forcibly outwards from her body; at that time she was sensible of a jerking sensation in the thigh, and of a noise resembling that produced by sudden extension of the finger joints.

From the catamenia having appeared soon after her admission, reduction was delayed till the 9th. The pullies were applied, and on very slight extending force being employed, the head of the bone was easily removed from its unnatural situation into the

acetabulum, by rotating the femur, and pushing its head downwards and forwards. Considering the duration of the displacement, the facility of reduction was remarkable, but may have been partially attributable to the patient having led an extremely dissipated life, and consequently possessing very little muscular power. A pad was placed between the knees, and a roller applied around them. During the night she had been extremely restless, getting frequently out of bed, and next morning the head of the bone was found to be again lodged on the dorsum of the ilium. Reduction was however accomplished with even greater facility than previously; the knees and ankles were bound firmly together, and the horizontal position strictly enjoined. No untoward circumstance afterwards occurred, and the patient was soon dismissed, enjoying the free use of her limb.

SURREY DISPENSARY.

To the Editor of the *London Medical Gazette*.

SIR,

HAVING obtained, from the physician under whose care the following case occurred, permission to offer it for insertion in your valuable publication, I have forwarded it to you. If it should appear worthy of being put on record, a place may perhaps be found for it in your journal.

I am, Sir,

Your obedient servant,

WILLIAM GREY.

High-street, Southwark,
Sept. 27, 1830.

Case of Spasmodic Dyspnœa cured by Purgatives.

Maria Mercer, ætâ 22, unmarried, entered as a patient of the Surrey Dispensary, August 22, 1829, under the care of Dr. Whiting. She was a stout plethoric woman, with a somewhat florid complexion. About eight years ago, during a convalescence from fever, she, for the first time, became subject to hysterical fits, which recurred with considerable severity at irregular intervals, up to the period of admission. About four years ago, when in her 18th year, she was first attacked with the symptoms under which she laboured at the time of her admission. Her indisposition came on gradually, and was attributed to cold. Her bowels had previously been much confined, requiring very powerful cathartics to operate upon them. The following reports were taken at each visit:—

August 22.—She has now a paroxysm of dyspnœa. All the muscles employed in breathing are thrown into violent spasmodic action; the shoulders are forcibly elevated

at each inspiration, and cannot be restrained by the strongest pressure; the nostrils are dilated, the countenance flushed and anxious, and she has exactly the appearance of one who is out of breath from the most violent exertion. The respirations are about 60 in the minute, the heart beats forcibly, and the pulse is very much accelerated. The fit has generally continued two or three days, sometimes a week, and once even as long as a month. She states that when it is very severe, she is obliged to support herself in a semi-erect posture by bolsters, sometimes passing two or three days together without sleep; at length, however, she becomes excessively drowsy, falls asleep, and the respiration returns to its natural condition. The paroxysms have usually recurred after short intervals, but even when free from them, the breathing is quicker than natural. She complains during the paroxysms of a distressing sense of tightness across the sternum. The true hysterical fits, above alluded to, frequently occur both during the attacks of dyspnœa and in the intervals. She states that she is enabled to predict the return of dyspnœa by a sense of sickness, and by pain at the lower part of the sternum, with a voracious and depraved appetite. There is, both during the paroxysms and in the intervals, a constant pain under the left mamma, not increased by pressure. She complains also of a dull aching pain across the abdomen, especially just above the iliac fossæ. The bowels are obstinately confined, her motions very infrequent, hard, and passed with much difficulty; she has a voracious appetite; the tongue is clean; the pulse natural in the absence of the fits; the catamenia have been regular from the commencement of her disease, although there is always considerable pain at the menstrual periods.

She had been frequently under medical treatment for this complaint before her admission into the Surrey Dispensary, and had taken almost all the powerful antispasmodic medicines in the Pharmacopœia without any effect. She has also lost blood repeatedly, and blisters have been applied to the chest, without the slightest benefit. The following remedies had at different times been employed:—Opium, Hyoscyamus, Digitalis, Hydrocyanic Acid, Camphor, Oil of Amber, Fetid Spirits of Ammonia, Sulphuric Ether, and Valerian.

The following purgative was prescribed:—

R Pul. Aloes gr. vj.

— Ipecac. gr. ii. M. f. pulv. omni nocte sumendus.

Ol. Ricini ʒiij. omni mane sumend.

24th.—The purgatives have operated three or four times, and a quantity of hardened scybala have been passed. The dyspnœa ceased yesterday afternoon.

Perstet in usu purgantium.

25th.—Has had but one motion since yesterday. Two hysterical fits have occurred. Considerable pain exists in the epigastric region, extending in a less degree over the whole abdomen. Bleeding to the extent of 16 oz. was employed, which removed the pain.

Perstet in usu purgantium.

26th.—Has passed two solid evacuations, and has had two more hysterical fits. The pain in the abdomen has returned with greater violence than before. There is also great pain in the head, with intolerance of light. Pulse rather hard. Blood removed yesterday cupped and buffed.

Repetatur V.S. ad \bar{x} xii.

Perstet ut antea.

28th.—The purgatives have been omitted since last report, and the bowels have not been opened. A severe fit of dyspnœa has taken place.

Repetantur pulveres et oleum ut antea.

29th.—Has passed two dark and offensive motions. The fit of dyspnœa has subsided. Has considerable pain in the head and in the epigastrium. She feels very weak and restless.

Perstet ut antea.

Sept. 1st.—Bowels acted on by the medicine. The evacuations are of the same character as before. Has had a slight return of dyspnœa, which has not lasted long.

Perstet ut antea.

4th.—Bowels open. Motions still dark, scybulous, and offensive. Has had a slight return of dyspnœa.

Perstet ut antea.

8th.—The medicines have acted too powerfully, and they were accordingly ordered to be omitted. An effervescing draught to be taken three times a day.

11th.—Has had but one evacuation since the last report. The dyspnœa has returned with great violence.

Omittatur haustus.

Repetantur Pulveres et Oleum, ii. a.

15th.—Since the last report the evacuations have been very frequent, watery, and unmixed with scybala. The fit has become more severe.

Omittantur Pulveres.

17th.—Since leaving off the medicines the bowels have become costive, and the dyspnœa is very much aggravated.

Repetantur Purgantia.

19th.—The bowels are now free, and

scybulous motions have been passed. The dyspnœa is subsiding.

21st.—The purgatives have been improperly omitted, and the dyspnœa is much increased. Has had three hysterical fits. There is some pain in the abdomen.

Repetantur Purgantia.

Hiрудines, xx. abdomini applicandæ.

Oct. 1st.—The dyspnœa had subsided on resuming the medicine, but during the last three days only one evacuation has been passed, and the dyspnœa has returned.

Perstet ut antea.

5th.—The dyspnœa ceased after the operation of the first dose of the medicine.

Perstet ut antea.

9th.—Has had diarrhœa for the last three days. The medicines are ordered to be omitted. No dyspnœa.

11th.—The diarrhœa has subsided. She is now menstruating, with dysmenorrhœa.

Repetantur Purgantia.

23d.—Has been free from dyspnœa till within these two days, when diarrhœa supervened, and the paroxysms recurred. To omit the cathartics for a day or two.

Nov. 2d.—Dyspnœa subsided soon after the omission of the purgatives. Bowels open.

Perstet ut antea.

21st.—The medicines have not operated for some days. The dyspnœa has returned for a few hours.

R Pulv. Aloes, gr. x.

— Ipecac. gr. ii. M. f. pulv. o. n. sum.

Addē singulo dosi Olei, gtt. i. Ol. Crotonis.

27th.—Since taking the last medicine she has been violently purged. Her sleep has been much disturbed, and a severe fit of dyspnœa has occurred.

Omittantur medicamenta.

28th.—Diarrhœa and dyspnœa have both subsided. Let the medicines first prescribed be resumed.

From the 1st to the 21st of December she has continued progressively to improve. Her evacuations are now of a natural consistence and quality. The hysterical fits have entirely left her, nor have the paroxysms of dyspnœa recurred. Discharged cured.

Since the patient's discharge in December up to the present time (Sept. 2d), a period of about nine months, she has resided, in the capacity of cook, in a gentleman's family. I have had frequent opportunities of seeing her. She has enjoyed good health, although

she has been troubled by occasional slight returns of dyspnœa, which have invariably subsided on the bowels being freely acted on by purgatives.

This case may be added to the instances already on record, in which aperient medicines carefully and judiciously administered have effected a cure of diseases characterised by inordinate and unnatural actions of the muscular fibre. The affections of this kind in which purgatives have been most frequently and effectually resorted to, are Chorea and Hysteria. A reference to the valuable work of Dr. Hamilton, and to the numerous cases which have from time to time appeared in the periodical publications, as well as daily experience, appear to establish the superior efficacy of these remedies over all others that have been hitherto employed for the cure of these complaints. But there is a form of disease which appears to occupy a sort of intermediate station between Chorea and Hysteria, resembling each of them in some, though differing in other of their symptoms, in which cathartic remedies have been likewise administered with much advantage. To this set of diseases the present instance appears to belong, although it would be included by some late writers under the general head of Hysteria.

In no case of these anomalous affections yet published, does the efficacy of aperient medicines appear more clearly established than in the present, as no other remedy, if we except the bleeding which was employed merely for the relief of a symptom, was used. The great benefit resulting from the employment of purgatives has been placed in a still more striking point of view, by the information obtained from the patient since her discharge from the dispensary. She states, that previously to her coming under the care of Dr. Whiting, the longest interval which, from the commencement of her disease, she had passed free from the attacks of dyspnœa, occurred whilst constantly employing aperient remedies at the suggestion of her friends. She had also been free from the dyspnœa at one time during six, at another during three weeks, whilst taking purgatives regularly night and morning, by the advice of her medical attendant. The daily reports of this case also show how materially the se-

verity of the complaint was influenced by the condition of the bowels. By referring to the reports of the 28th August, the 11th, 17th, and 21st September, and the 1st October, it will be seen, that when the purgatives either failed to operate or were omitted, the dyspnœa was much aggravated, if it existed; or a recurrence took place if the patient was previously free from it. The reports of the 15th September, and the 23d and 27th October, prove that the same consequences resulted from the too active operation of the medicine. Although this striking connexion between the state of the alimentary canal and the irregular muscular contractions has seldom been remarked in the cases of this kind which have been hitherto published, yet there is reason to believe that attentive observation will often detect such a connexion. In the report of some cases of chorea, published in the *Edinburgh Medical and Surgical Journal*, vol. i. p. 25, by Mr. M'Mullin, it is remarked, that, "during the progress of the cure, if at any time the cathartics did not procure an evacuation, the involuntary motions recurred, and all the symptoms were aggravated."

It is, perhaps, worthy of remark, that the hysterical paroxysms which had occurred at irregular intervals for eight years previously to her admission into the Dispensary, have never recurred since her discharge from it.

TORSION OF ARTERIES.

M. AMUSSAT lately presented, at the Academy of Medicine in Paris, two boys and a little girl, on all of whom he had practised amputation of the knee, for white swelling. In these cases he adopted the method of *torsion*, or twisting the arteries, instead of applying a ligature to them. The results were highly satisfactory. Can any of our readers inform us whether this plan has been tried in England?

NOTICE.

We this week give the first of a short but interesting set of Lectures on some parts of Comparative Anatomy. Other particulars, connected with our future plans, we shall announce in our next Number.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 9, 1830.

LECTURES

ON THE

THEORY AND PRACTICE OF
MEDICINE,

Delivered at St. Thomas's Hospital,

BY DR. ELLIOTSON.

LECTURE I.—October 5th, 1830.

Nature of the Medical Profession—its advantages over other pursuits—best modes of cultivating it.

GENTLEMEN,—Of the importance and utility of the profession which you have chosen, I need say but little: I take it for granted that unless you had been fully convinced on these points, you would not have selected it. From its importance and utility there results, as you must also be aware, a high responsibility; but neither will I dwell upon this. You must recollect the trite passage in Cicero where he says—"no one approaches nearer to the gods than he who employs himself in giving health to his fellow-creatures." My objection to dwell upon the importance and the utility of the profession, and the responsibility you incur in following it, is principally grounded upon the dislike which I have to every appearance of cant. Lord Byron said—"this is the age of cant." Whether it be so or not, yet it is a fact that it is impossible to speak much of conscience, duty, and responsibility, without incurring the appearance of indulging in that mode of speech; and I would therefore rather leave these matters to make their own impression.

I prefer to dwell upon the beauty of our profession. Respecting many occupations in life, there is great doubt as to their utility—many are a mere waste of time to indulge the follies and whims of others, and some may be considered as absolutely injurious. But respecting our profession, no such doubts can exist, whether we view it as a science

or as an art. To put utility out of the question, your studies will be found full of beauty. The knowledge which you have to obtain is the knowledge of nature, and the art which you have to learn consists in influencing the operations of nature—influencing them in one of nature's most wonderful productions—an animated being.

Every branch of science is delightful. To depreciate other departments of science in order to extol our own, is folly. Astronomy, mineralogy, and every part of science, is delightful, but certainly none gives more gratification than anatomy and physiology—human and comparative. Nothing is more wonderful than the construction of an animated machine—nothing is more wonderful than the phenomena which that structure affords—nothing is more curious than the operation of external agents upon an animated frame—nothing is more wonderful than the influence of air and food, and all those things around us which are indispensably necessary to our existence, and nothing more wonderful than the operation of those agents which are called poisonous, or which produce ill effects upon our frame, and indeed than the changes produced by all unfavourable external circumstances—nothing is more singular than the alterations of functions, nothing more singular than the various changes of structure. Equally interesting are those alterations which are induced, not simply in the individual, but in his posterity. Again, nothing is more wonderful than the mind of man and the mind of brutes—the various degrees of intelligence, and the various inclinations and propensities: and all these subjects also belong to our profession. The functions of the mind are nothing more than functions of the body, and therefore they come especially under the consideration of physiologists. The arrangements of the mind come particularly under our care. In fact, the study of one's-self—the desire to be fully acquainted with one's own frame—must interest every one. There is not a clown who is not anxious to know the

use and the nature of the various parts of his frame. In those towns where anatomical collections are open to the inspection of the public, you will see crowds of the most ignorant persons assembled in the rooms for that purpose. The study of these parts of our profession (and great parts indeed they are) is nothing more than what every person of liberal education—every gentleman would wish to prosecute; and in studying them, therefore, you are to a great extent only acquiring that knowledge which, were you men of independent fortunes, you would wish to obtain, as forming part of a liberal education.

Again, the accessory branches of knowledge are all of the same description—chemistry, botany, and natural philosophy. A knowledge of these, to some extent, is absolutely necessary to a medical man, and they are now allowed to be a necessary part of a liberal education. That accessory branch which is most important of all to a medical man—chemistry, is studied far more than any other by those who wish for general information.

In being trained up, therefore, to the medical profession, you are, to a very great extent, only acquiring a part of the most enlightened and liberal education which a person of the greatest affluence would wish to bestow upon his children. Many in your rank are brought up merely to commercial pursuits; but in being members of the medical profession, you at once become, or ought to become, scientific characters. Not only have you these great advantages in studying the medical profession over the great majority of mankind, who are doomed to mere drudgery without science, but you enjoy a great superiority even over those who have what are called liberal and learned pursuits. Those who are brought up to the profession of divinity have for the most part, in the practice of their profession, far less room for the employment of intellect than that which we possess. It is true there is no object in which the heart and the feelings can be more satisfactorily engaged than in giving advice and consolation to the afflicted and the dying; but so far as the practice of the profession is concerned, far less intellect is employed; and with respect to what is considered the scientific part, every sect has its own peculiar opinions, and its members must not deviate from any one of those opinions. In our profession, however, there is no sect, and every person has a right to follow his own opinions on any particular point. In this respect you may congratulate yourselves on your great superiority over those who are brought up to the profession of divinity. With regard to the law. The law does not require the study of nature; it is the study of technicalities and a number of capricious points which have been settled in the most arbitrary manner. The practitioner has to follow particular forms and precedents, and is not allowed to follow

his own judgment. In a great number of cases, the object is to make the worse appear the better cause. In most cases there are two contending parties, one of whom must sustain a defeat. Nothing of this sort occurs in our profession. Our study is nature; not the caprice—the *arbitrary caprice* of man, but nature as it is ordained by the Almighty. In pursuing the practice of our profession, we are allowed to use our own judgment—not compelled to act in this or the other way, but to exercise our unbiassed judgment, and proceed in the mode that we think best. I must therefore contend, that the medical student enjoys a great superiority over the student of either of the other learned professions.

Again, there is another advantage in the study of our profession—it is delightful from its very first commencement. Unlike many other studies, there is nothing at the outset which creates disgust. In the study of music, of Latin, and of Greek, what can be more disgusting than the labours of the first few months—nay, of a much longer period? But every point in the study of our profession is delightful. In the study of anatomy, even the bones, dry as they are, do not afford a dry subject for contemplation. The reason, the advantages, the form of every bone is a source of wonder and delight. It is the same in all the other departments of our profession—in chemistry, in botany, every point that is learnt is from the first pleasurable. When you first hear of the properties of oxygen and hydrogen, that knowledge is as delightful as any that you subsequently obtain in the study of the science. Far different, therefore, is the study of our profession to the study of many others. I never shall forget the misery I suffered in attempting to learn music, Latin, and Greek, for month after month; but in the study of my profession no one circumstance presented me with disgust; on the contrary, every thing I met with afforded me the purest gratification.

Although, however, the greater part of the study of our profession is nothing more than that which a man of the best education should prosecute, yet it is to be remembered, that in acquiring a knowledge of anatomy, physiology, chemistry, and botany, and thus becoming scientific characters, these things are all to be learned by us in subserviency to practical purposes. We all enter the profession for the purpose of practising it, and whatever we learn in that profession is necessarily subservient to our future proceedings. In this respect, therefore, we differ from those who simply have a liberal education—we go beyond them; we are not to be contented with a mere acquaintance with anatomy, physiology, chemistry, and botany, but we must attend to a number of minute points of learning, for practical purposes.

The branches of anatomy, physiology, and chemistry, cannot be too thoroughly learned

—no medical man can know too much of these subjects ; but it is to be remembered, that you may be the best anatomist, the best physiologist, the best chemist, and yet know nothing of the practice of medicine and surgery. The knowledge of anatomy does not imply a knowledge of physiology ; nor do anatomy and physiology imply a knowledge of the various operations of injurious agents ; nor a knowledge of the mode of remedying the ill effects of disease, whether it be of that description which falls under the care of the surgeon or the physician. Many men pride themselves particularly on their knowledge of these collateral branches ; and certainly no one can be too well acquainted with them ; but I wish to caution you against stopping short, and thinking that because you are a good anatomist, or a good chemist, you know enough. But while I say this, I trust you will not consider that I wish you to be in any degree deficient in attention to any one of these branches. It is the fault of many practitioners to be so little acquainted with physiology, anatomy, and chemistry, that a number of singular circumstances take place in their practice—in the cases they attend, which they are not able to appreciate. Unless a man is what we call, in common language, a good anatomist—I do not mean a finished anatomist, capable of teaching anatomy—it is impossible for him when he opens a body to know what is healthy structure and what is not. Many persons, who are fair practitioners otherwise, are not aware of all the morbid changes which present themselves during the inspection of a body. A good anatomist will sometimes discover morbid appearances which other practitioners did not. Unless, therefore, you have a full knowledge of every part of your profession, it is impossible for you to appreciate many circumstances that come before you ; and what is more, it is utterly impossible to advance your profession. Ours is a science which every one, by devotedness and study, and keeping a constant look out, can promote ; but a man cannot do that without having a solid foundation ; which does not consist in a knowledge of one part of his profession or of another, but in a knowledge of the whole.

With respect to the practical part of the profession, I must consider it equally interesting with anatomy, physiology, and chemistry. The phenomena of diseases, their causes, their courses, their effects, their terminations, their varieties under various circumstances, are all full of the highest interest even as mere sciences, without any reference to practical purposes. The knowledge of every species of disease, whether medical or surgical, is as full of interest as the knowledge of healthy structure and function. To learn this fully, it is necessary both to attend lectures and to frequent the chambers of the sick, just as for the purpose

of learning anatomy it is requisite to attend lectures and the dissecting-room.

The lectures which I have the honour to deliver here, on the practice of medicine, must be considered as preparatory to the information you will obtain by going round the wards and attending clinical lectures. Without the knowledge that these lectures will afford, it would be in vain for you to attend either the one or the other. You would be in the condition of a traveller who enters a country without having previously seen a map of it, and without having read an account of it ;—you would be wandering in an unknown land on a journey of discovery. The purpose of these lectures is to afford charts and maps, and topographical accounts.

In learning these practical points, you will, I trust (whether the disease be called medical or surgical), study every disease simply in itself, without a reference to whether it is treated by a surgeon or by a physician. The same disease seated in different parts of the body—may precisely the same disease, seated in the same structure—will fall under the care of the surgeon, or the physician, according to its accidental situation. Suppose an aneurism be seated close to the heart, so as to produce a difficulty of breathing and cough—a variety of *medical symptoms*, as they are sometimes called, are induced, and it then falls under the care of the physician. But if the same disease, instead of being in that part of the artery, be situated a little lower down beneath the clavicle, or in the axilla, or in the extremities—in the ham, for example—it then falls under the care of the surgeon : yet the disease is precisely the same, and he who has learnt its nature well in one situation, will be equally acquainted with its nature in another.

Again : the very same symptoms will sometimes fall under the care of the physician and sometimes of the surgeon. Vomiting and constipation will sometimes arise from the mere application of cold to the body ; and the very same state of the parts, the very same symptoms, will arise from a mechanical stricture,—may be produced by a hernia—by a portion of protruded intestine being compressed, and therefore unable to return—and then the case falls under the care of the surgeon : but if the same disease—the same obstruction of the bowels, and inflammation, and general symptoms, arise from a different cause—the disease then comes under the care of the physician. Accordingly as an aneurism is situated in one or the other of the parts that I have mentioned, so it requires one or the other mode of treatment ; yet, how could the surgeon be fit to operate unless he understood what may be called the medical part of the case ? or how could a physician safely attend such a patient unless he could ascertain whether the case was one that required medical or surgical treat-

ment? You must study, then, every disease, without the least reference as to whether it is to be treated by the physician or the surgeon. The disease may be precisely the same, and, merely from its difference in situation, or the difference of its cause, it may fall under the hands of one practitioner or the other. This leads me to say that you ought not to form any illiberal notions, so as to give a preference to medicine or to surgery—so as to deery either surgeons or physicians. There is an art and a science of medicine—there is an art and a science of surgery—and they ought both to be known. No man can be a good physician unless he be a good surgeon (I do not mean to say unless he is a good operator, but unless he possesses a knowledge of surgery); neither can a surgeon advance one step in his profession with safety unless he be at the same time a physician. The surgeon ought not to cry out, "Thank God I know nothing of physic!" and the physician ought not to cry out, "Thank God I know nothing of surgery!" Such conduct would be equally disgraceful to both parties. The physician ought to be able to say, "Thank God I know something of surgery!" and the surgeon ought to be able to say, "Thank God I am not unacquainted with physic!"

All this narrowness of mind is a species of illiberality which I hope is fast passing away. No man can understand one part of his profession well unless he be acquainted with the other. The student should never learn each part separately; on the contrary, he should learn medicine and surgery indiscriminately; and when he enters on practice, if he choose to direct his attention to one branch more than to another, for the purpose of acquiring extreme accuracy, or minute skill, there can be no objection to it; but no man is qualified to practise in either department who has not made both the object of his study.

In the pursuit of your studies, allow me to request that you will never consider that you are learning something merely for the purpose of practising it as a source of livelihood. The whole of the profession is full of delight. The knowledge of the healthy body—the knowledge of the diseased body—the knowledge of the means, and of the mode of applying those means to control disease, is so exciting, that if you once take an interest in it you will never fail, however trifling the case, to find a source of pleasure. Unhappy must be the man who goes to the bed-side of his patient to order this or that mechanically, without being excited by the phenomena which he witnesses, and without a desire, where the disease is obscure, of increasing our stock of knowledge and making some discovery in regard to it. I cannot conceive a more unhappy being than one who gets up in the

morning to go the round of his parish and collect so much money. If you will make a point of inspecting the body of every patient who dies under your care; if, during life, you always endeavour to penetrate the secret of all the phenomena of the disease, and all the circumstances that have given rise to it, you will find a source of delight far greater than any pecuniary reward can produce. Of course we all enter the profession with the view of making money; to say otherwise, would be affectation;—nevertheless, our profession is one which, while it is a source of pecuniary advantage and support, also makes us men of science, and confers upon us pure scientific delight, if we choose to accept it. There is no case, however trifling, as I before said, which has not something interesting in it: and very often cases occur to us full of excitement, full of interest; and it will be our own reproach if we feel not the pleasure which they are capable of affording.

With respect to pecuniary advantages, you will find that a full knowledge of the profession is the best way to secure them. Every one must see around him persons who have advanced to great riches, and also to honourable names in the profession, little of which has been acquired by their own professional merit; but the far more certain mode of success is to obtain a full knowledge of the profession, and to prosecute it daily as a science—as a source of intellectual improvement, and the means of doing good to others. This mode of rising in the profession I know is slow, and to those who have but slender means, and cannot easily wait, the temptation to use other methods of advancement is very great; but still I believe there is no man who makes himself fully acquainted with his profession, and is assiduous afterwards in his business, and conducts himself with propriety, who may not succeed; and I am convinced, provided there be propriety of conduct, the greater degree of knowledge a man possesses of his profession, the higher he will rise. The rise may be slow, but it will be certain.

Happily, the time has now arrived when it is not through the influence of any rich or titled patron that a man can make the best progress in his profession. The public mind has been enlightened by the freedom of the press, and by the publication of all kinds of books, so that a man, without any patronage or introduction, has an infinitely greater chance of rising in his profession now than he had before. If a man make himself thoroughly acquainted with his profession, and then throw himself upon the public, he will rise with greater certainty than if he do not study his profession, and merely follows in the train of some leading practitioner. "Time and chance happen to all men," and time and chance will happen to him. His

acquirements will be appreciated, and he will find the reward he deserves.

I have to congratulate you on another circumstance—namely, the superiority of the education which is given at the present day. The instruction now afforded is certainly not what I think it ought to be; and the devotion of five years to apprenticeship, and but two to systematic public study, I consider preposterous. I can imagine many improvements capable of being made in our mode of instruction, but the advantages connected with education now are infinitely greater than they were ten or fifteen years ago—ininitely greater than when I was a student. I do not think too much praise can be given to the Apothecaries' Company for the regulations which they have adopted, though I lament that they are tradesmen as well as a medical body. Power has been confided to them, and I believe they have exerted themselves greatly for the purpose of giving effect to what has been granted them. At one school which I attended when a student, perhaps then the first in Europe, not one half of the diseases which occur every day were mentioned, and the course was never completed: I do not think it ever reached the end, or even half-way; no morbid anatomy was taught; not a drawing nor preparation was shewn. And again, with respect to another school at which I studied, subjects were treated in a single lecture to which I shall devote two or three, and not above a dozen preparations were shewn during the course. With respect to inspections, I never saw a physician dirty his hands with the living, or think of examining a dead body; but now every subject—if the friends make no objection—is carefully examined in this hospital.

Besides the progress of instruction, there are other great improvements in our profession. Physiology has made great advances within a few years, and so has the history of diseases. In regard to the establishment of diagnosis, perhaps the greatest improvements ever made have been within last ten years. Again, as to remedies, many have been introduced of the very highest value. I need only mention quinine as one, iodine as another; and many remedies already in use have been found efficacious in diseases for which it was not supposed that it would be safe to employ them at all, or to such extent.

How much more may be done in this way, it is impossible for me to predict, but you must allow me to repeat what I before said—that there is no man who may not advance his profession; there is no man with a good knowledge of anatomy, physiology, and pathology, who may not by assiduity—by being constantly on the look-out—make improvements in our knowledge of the symptoms, the nature, and the causes of diseases

—in our mode of distinguishing them, and in the application of remedies. I am convinced there is no man who, if he choose, may not confer benefit on his profession in one of these respects; and to encourage you to this allow me to say that it is impossible to imagine what may be effected by remedies. It was only in the time of Lord Anson that as to scurvy, one of the most dreadful diseases that can be conceived, covering the body with hideous and stinking ulcers, reducing the whole frame to such a state that you could hardly conceive it possible for a human being to exist under such circumstances, it was said, that for physicians to think of remedying such a state was absurd—that it never could be remedied—that no medicine could be discovered that would produce any effect upon it—and yet we now know that it may be remedied by a little lemon juice and fresh vegetables. It is impossible to say how much more may be done in discovering remedies, in detecting the nature of diseases, and in the mode of forming a diagnosis. I trust you will consider, that in obtaining a full knowledge of your profession, you are not only qualifying yourselves for practice, but for benefitting science; and remember, that in aspiring after the highest honours of science, the foundation must be laid in plain and solid elementary knowledge.

You have also to congratulate yourselves upon another thing; that is, the perfect freedom which there is in our profession. Every man is allowed to enjoy his own opinion on every point—every man is allowed to prosecute his researches in his own way. In the year 1560, to show you how differently things were then, a physician, named Geynes, happened to say that Galen was wrong, and having said so, he stuck to it, and refused to allow that Galen was right. The consequence of this was, the President of the College of Physicians, Caius, actually imprisoned him; and poor Dr. Thos. Geynes was kept in prison till he acknowledged his alleged error and said that Galen was right, and he had misunderstood and misquoted him.—In the present day you may contradict the College of Physicians—you may contradict the College of Surgeons, and all the medical men in the universe—and no one can say any thing to you, can do more than attempt to refute you. Every man who has teleable sense is now heard, however humble his station. This, however, leads me to hope that you will display the same consideration to others that you expect to receive from them yourselves—that you will never despise knowledge because it comes from any particular source. Who ever presents a new fact, however humble the situation which he occupies in his profession—what ever distance he may reside from the metropolis, has a right to have it appreciated.

It is *what* a man says, and not *who* says it, that is to be considered.

Our profession is one which must engender every kind of liberal and honourable feeling; and we must reflect that no one, nor indeed any limited number, is sufficient to prosecute our science, but that we are indebted to all who will prosecute it, without making any nice inquiries as to who they may be, where they may reside, or to what school they may be attached. I trust there will never be the least animosity between gentlemen of different schools. We must consider that there is an immense vineyard, and that we are all necessary to cultivate it.

I have said that these lectures must be viewed merely as charts, and maps, and sketches, for the purpose of making you generally acquainted with the practice of medicine. It is absolutely necessary, however, that other sources of knowledge should be open to you, and on that account Clinical Lectures will be given here. I shall deliver one every Monday, at one o'clock, and whenever a body has been inspected subsequently to the preceding lecture, I shall bring forward, if possible, the diseased parts, and make the clinical lecture subservient to morbid anatomy, because this is best taught with recent specimens.

I trust that both with respect to these and to the clinical lectures, you will always ask me any thing you desire to know. I hope you will question the correctness of any thing I say, if you doubt it: if you differ from me in opinion, and tell me the grounds on which you do so, I shall patiently listen, and be thankful for information. Cullen used to say, that he was indebted to his pupils for a great deal of his knowledge—for many facts which they had mentioned—for many arguments, many doubts, and many suggestions. Now if Cullen could say so, I am sure I may. If it were not too much for Cullen to allow this, it is certainly not too much for me to make the same acknowledgment. I therefore trust you will on all occasions question any thing you doubt, and I hope you will suggest any thing that occurs to your minds. I trust you will mention any facts that may have come to your knowledge during the former period of your studies. I have derived much information from this source, and should be very sorry to lose it. I trust above all that there will be reciprocal kindness between us;—that you will not consider me a mere teacher, who has come here to lecture to you for an hour, but as your friend—*anxious to tell you all I know, not only in lectures, but in conversation; you will find me ready at all times to communicate what information I can.*

On Thursday next I shall commence the subject of Inflammation.

INTRODUCTORY LECTURE,

Delivered on opening the London University for the present Season,

By J. CONOLLY, M.D.

Professor of Medicine.

GENTLEMEN,—The duty which has devolved upon me to-day (solely in consequence of the order of rotation observed here with respect to it,) is that of opening the session of the medical school of this university.

I can assure you, however, that although I did not feel myself at liberty to decline this duty, I have undertaken it with much reluctance; among other reasons, because I am justly apprehensive, in the performance or so important as well as honourable a task, of the possibility of prejudicing the interests of the reputation of others by any omissions or any deficiencies of my own.

Recollecting that only two years have elapsed since I had the honour of appearing in this place to deliver my *first* lecture, I cannot forget, now that I have to speak for my medical colleagues as well as for myself, that there are many among them whose longer experience, as well as their greater attainments, would better have enabled them to perform what I am to attempt. Almost yet a stranger in the London schools, I am sufficiently conscious that *my* principal claim to your attention must be the circumstance of my being classed in this institution with the many accomplished persons who fill the other professorial chairs.

I trust, gentlemen, that when I say there is some interest, or, indeed, a great interest, attached to the annual opening of our lecture-rooms, our museums, our libraries, and all our means of communicating knowledge to those who, from all parts of this kingdom, resort hither, to acquire what is to make them useful members of the communities in which they are to act, it will not be thought that I am using the language of presumption, or endeavouring to hold up to undue admiration this alone among the many celebrated schools of London. The interest is one which attaches to every place of education, and certainly to this place, which offers so many aids to a complete education, in a very high degree.

Whatever difference of opinion may have existed as to the original necessity of establishing our medical school, must give way before the fact that in the second year from our establishment we had nearly 300 medical students attending in it. It is a source of allowable satisfaction to myself, and, I doubt not, to my medical colleagues, to know that these were attracted solely by what we had to offer in the way of education, and not gathered together by any unworthy arts, or by any insidious methods of

panegyric on the one hand, or depreciation on the other. We took our station by the side of the established schools in no illiberal spirit, not denying, not concealing their separate merits, but believing that opportunities might here be found for a concentration of exertion and of zeal, and for other advantages which would be useful to those studying with us, and give us no small chance of honourable success.

I think I am warranted in saying that the result has justified these expectations. The general prosperity of the school, and the acknowledged character of our students—their industry, and their proficiency, shewn by efficient examinations—are doubtless things which we are glad to reflect upon:—but in the meantime, we do not rest content with the gratification of mere personal feelings, but remember that we are engaged, in a common cause with other teachers, to prepare our pupils for duties of great importance to society, and to raise a school of medicine worthy of the capital of a great nation.

For my own part, gentlemen, when in each successive year I commence my winter labours here, I become more and more impressed with the consideration that I have two especial duties to perform; one with relation to the pupils who are for a time entrusted to our care, and another to the public, for whose service we promise to instruct those pupils. When I see our lecture-rooms crowded in the commencement of each session, and observe the younger portion of the audience, who are eager to enter upon their studies, and who look forward to life as men only once in their lives do look forward to it, I do not forget, that along with them there is many an anxious parent about to confide his son to us, and that that son's progress in his studies, his future fortunes, his usefulness to society, his character, and his happiness, depend, in no small degree, on the industry, and fidelity, and friendly help of his instructors.

As respects the student himself, there is yet interposed between him and the duties and cares of practice an interval of study, which I think he will find one of the most agreeable parts of his life, and to which I am sure he will look back, in future years, with many a wish that he could again enjoy the advantages which students alone possess. I do not consider it beyond a teacher's duty to pay some attention, without officiousness or meddling, to the mode of life led by those who are for the first time their own masters. It may sometimes be in his power to stimulate them to greater industry, or to free their minds from doubts and despondencies which obstruct industry, and suppress a requisite degree of hope; and my experience as a teacher has already shewn me, that it is sometimes necessary to warn them against studies protracted beyond their strength,

and which are gradually undermining the powers of life. A lecturer must have forgotten his own anxious studies, and have lost all sympathy with the hopes and fears of those who are following him in the path of life, if his feelings are blunted to considerations like these.

I cannot make these allusions without being reminded of the recent and untimely death of one of our first, and one of our most distinguished students, who was well known to many now present, and who was the first on whom a prize of merit was bestowed in this University: I mean the late Mr. George Atkinson, of Sheffield. At the close of our first session, which was also his first year of medical study, he gained no fewer than *three* gold medals, one of which, I am proud to remember, was in my own class. They were won by extreme labour, the capacity for which was in him combined with talents and virtues affording the strongest assurance of future distinction. Such, I know, was the impression left on the minds of all his teachers. A few short months only have elapsed since he took leave of us, with the intention of practising in his native town, and we have learnt that he almost immediately fell a prey to consumption. To his relatives, to whom his loss must for a time seem irreparable, I hope it is some consolation that his short life was yet long enough for him to gain the esteem of all who knew him; and that, in the generous competitions with men of his own age, he gained distinction without exciting envy; whilst, by his early death, he was spared other and unavoidable competitions, which too often put an end to friendships, and vex the heart with animosities that deprive life of half its value.

I believe the generality of students, who pay common attention to their studies, soon lose every minor feeling in the interest which those studies inspire. And, certainly, of all students, the medical student has the greatest advantage in this respect, so various and so delightful are the branches of study to which he is at once introduced.

I leave to my medical colleagues, each in his own department of instruction, fully to develop the attractions and applications of the several parts of medical science, and to shew that they are not only pleasing when presented in one great design, but even in detail: that if the first aspect of the new territory, which the pupil is about to enter, is agreeable, he will find, when he traces its features more minutely, new and continual sources of admiration and mental enjoyment—a region abounding in all the knowledge which can excite and recreate the senses, elevate the thoughts, inform the understanding, and direct him to those practical efforts which constitute the great end of all his studies.

The object of medical study, strictly so

called, is to acquaint the pupil with the structure and functions of the human body, in order that he may learn to mark the departures from either, which are occasioned by disease, and may understand how to employ various medicinal agents, the properties of which he is also taught, for the purpose of restoring the natural actions, and preserving the natural structure of any part that may be morbidly affected.

If we imagine that we accompany the student in his progress, and suppose him to be but commencing his studies, he will in a few days be listening to the lessons of the anatomist and physiologist. The interesting nature of his pursuits is perceived immediately. It is true, he perhaps begins by acquiring a knowledge of the bones of the human body; and that this is usually considered, although important, the least interesting part of anatomy. Yet the mere inspection of the human skeleton shows that if there is much in it to be learnt, there is also not a little to be, if I may so say, admired. Whoever contemplates in this bony frame the outline of the living man's figure, and recognises its proportions, stature, and position, must acknowledge that it may be interesting to examine the several parts of so remarkable a scaffolding. And the more minute the examination is—as in all the works of nature—the more worthy of examination is this apparently uninviting material found to be.

Tracing it up from its earliest appearance, and viewing it at its fullest growth, we are presented with a splendid illustration of the wise and wonderful workmanship of nature.

These apparent fragments, so small, and so faintly resembling the skeleton which is by my side, are the bones of the fetus at different ages, and of the infant at the time of birth. Well and truly was it said, "My bones are not hid from thee, though I be made secretly, and fashioned beneath in the earth!" No one can behold without admiration these minute rudiments of so much future strength, this accurate preparation for distant use, the work of Him "in whose book all the members were written."

In this specimen [injected parietal bone of the fetus] you may see the very manner in which the firm bone is deposited or formed, by slender and delicate bloodvessels, out of the circulating blood itself; the enduring solid from the fluid. This is one of the bones of the head of the human fetus: fine vessels finely injected are seen ramifying through it, from these the bone is formed; and by comparing it with another specimen, of which the vessels are not injected, you may distinctly observe the central firmness, the radiated structure, and the unfinished edges of a bone in the very process of formation. This line of little skulls shews the gradual growth and union of the bones of which it is composed, and in these adult

skulls [adult skulls—Brahmin, New Zealander, &c. &c.] you observe that the union is perfect.

Laid down by this masonry of nature, adapted to the form of different parts, [section of round bone, and of a vertebra,] the bones acquire a firmness and durability which belong to no other constituent of the body. These, for instance, are the bones of a mummy three thousand years old;—these the bones of animals (hyena and elephant) which destroyed their prey, or fed in fertile pastures, before the Deluge.

If time were allowed for detail, or if it were my province to speak of particulars, every separate bone would be found to shew contrivances deserving of remark. The singular unions of the bones by joints cannot but arrest the attention. The shoulder, the elbow, the wrist, the fingers—the thigh, the knee, the ankle, the toes—the bones of the spinal column—all present peculiar arrangements in this respect; joints as various in character as in their offices. In all we see a masterly union of great capability of motion with great security, great strength without great weight, and the freedom of movement which the united bones permit, nay the agile and graceful motions which they are brought to obey in the living body, offer matter of observation of a very curious and interesting kind; and not only so, but connected with knowledge very essential to the surgeon in many parts of his practice.

In this collection of the bones of the skull and face, in which every bone is present, but each is isolated by the frame-work on which it stands, is exhibited to us an instance of extraordinary osseous complication, productive at first of some embarrassment to the student, and greatly contrasted with the simplicity of the rest of the skeleton. This complexity is connected with the very important parts to which these bones subserve, for they protect the brain, allow bloodvessels to pass to it by foramina or perforations through the solid wall, and numerous nerves to pass from it, including the nerves of the senses. They contain and guard the eye, in a deep socket; the ear in a thick and excavated bone; and the organs of smell, of taste, and of speech; besides constituting a material part of the apparatus for the mastication of food. They also give attachments to a no less remarkable complication of muscles concerned in effecting deglutition and speech, and several motions of the head, and to others, the various actions of which, covered with the integuments, and known to common observers only in their effects, clothe all that is ghastly in the skeleton with what is expressive and often highly attractive in the living countenance.

I might speak of the admirable structure of the foot, on which the body is placed so firmly and yet moves so readily; or of the

adaptations of the hand and arm, to which man is so much indebted for dexterity, for protection, and for the means of preserving his existence. I have said enough, however, to shew that the youngest student cannot but be carried on from day to day with untired attention, until he becomes as familiar with all the minute processes of the bones of the skeleton as he is with the number of fingers upon his own hand. Thus the first step in his studies, and one which it is very desirable that he should make well, is accomplished almost without effort. The pupil has acquired knowledge by the mere gratification of natural curiosity. Whenever the difficulties have thickened, something has always been found to make the curiosity greater which conquers them. But the skeleton, prepared as it is for motion, can perform no motions of itself; it is a curious, but an inanimate and hollow statue: the statue is yet to move.

The next step in anatomical study is commonly that which displays the covering of these bones with all that remarkable apparatus for motion which, in the form of fleshy and tendinous muscles, arising from, and inserted into various parts of these bones, for which we often find distinct attachments—as on the scapula, the bones of the spine, the trochanter, the heel—are employed to effect those actions for which they have been seen to be fitted and designed. The muscles not only effect this, but also give to the bony frame a more symmetrical and less angular outline, and impart to it much of that character, and enable it to assume much of that expression, which all can read—beauty of proportion, the indications of strength or weakness, and the language of attitude and gesticulation.

The hollow parts of the statue are also shewn to be filled up with organs essential to life; so admirably arranged that all the motions of the powerful muscles, and all the movements of the hard bones, and even all the occasional contortions of the body, are performed without discomposing them. Nothing can be more curious than all this apparatus, or more full of variety than the mere anatomy of all these organs—*viz.* of the lungs and heart, stomach, liver, &c.

Yet these yield in interest to what is next demonstrated—to the system of vessels by which blood is circulated, from the first moment of life to the last, through all parts of the body; a system so extensive, so pervading, that the whole body has sometimes been said to be but a congeries or mass of vessels. It is, indeed, a tree of vascular ramifications, so numerous, so minute, and so exquisitely delicate, as to fill the mind with astonishment. I cannot shew you these, as the bones, in connexion. The preparations on the table illustrate their profusion in various organs.

The science of physiology, which teaches the offices and uses of the parts of which anatomy teaches the structure, now becomes inseparably connected with anatomical investigation, and this addition seldom fails to rouse the duller mind.

The fluid which circulates in the blood-vessels is found to be variously employed as it proceeds—not to be in a mere state of motion, but giving out or receiving materials throughout its whole course. As all the parts of which the human body is composed, and which in the common term of human life would (with the exception of the bones) be destroyed by mere mechanical injury, by unavoidable wear and tear, are undergoing continual removal and separation, the repair—the new material—is laid down by the blood-vessels, from the blood. For the accomplishment of this continual process of preservation, as well as for the more obvious one of permitting the growth of the body in early life, and also for the actual repair of parts casually injured or destroyed, are required, then, various adaptations of the extremities of the arterial branches to the plurality of offices performed by them in different parts of the body—the material, the blood, being in all the branches the same, but the mysterious workmanship at the extremities of them so different, that in one part bone is formed, in another muscle, in another membrane, in others fluids of various characters and properties: every where the exact material which is wanted, and in the exact quantity in which it is required.

It is also the office of certain extremities of the vessels to eliminate or excrete such parts or materials as have been employed for their apportioned time, or are useless. Another set or system of vessels, therefore, the absorbent or lymphatic vessels, is necessary for carrying back into the blood a part, at least, of what is no longer wanted. Some of these vessels, the existence of which was not ascertained until long after the discovery of the circulation of the blood in the arteries and veins, are shewn in these injected preparations.

The blood, so much of which is prodigally employed in the renewal of parts and in the formation of secretions, must itself become exhausted, without some perpetual fountain of renewal. For the purpose of keeping up so important a supply, we have all the extensive apparatus for the digestion of food, and for the conversion of parts of it into chyle, which being taken up from the intestines by the lacteal vessels, (shewn in this preparation, converging to form a larger trunk,) is carried into the blood, assimilated with it in the lungs, or converted into new blood; whilst that blood which the veins have brought back from the circulation being also purified in the lungs, and restored to its

pristine properties, is mixed with the new fluid, that the great processes of circulation, renovation, and repair, may know no stop or interruption.

It is for the accomplishment of all these actions that we have all that constitutes the filling up of the statue—the viscera of the thorax and of the abdomen—a variety of organs, of various size, not resembling each other in structure or arrangement of parts, diversified in office, no two alike; but each for some important part of the general work, and the most important of them the most carefully protected.

The student has now surveyed a strong and inanimate frame-work, elaborate contrivances for motion, large supplies drawn from the blood, differing greatly from the blood itself, and a compensating supply made to the blood by organs requiring sanguineous supplies themselves. The great questions yet remain:—Where is the origin of the motions communicated to these organs? All these parts are capable of actions, but how does action commence? how is it excited? how kept up? What sets the whole of this complicated machine in motion, and what keeps it in motion? These inquiries impart interest to every step of the student's progress—almost to every stroke of his scalpel.

To satisfy these inquiries must be unfolded to him the structure and functions of the nervous system—of the brain, spinal marrow, and nerves; a system of great extent, resembling nothing he has yet seen either in its anatomical character or in its properties; exceedingly delicate, its larger masses most carefully protected in bony cases of exceeding strength, (within the skull and the vertebral canal); its ramifications singularly intricate, and from its larger masses spreading and prolonged, by incredibly fine cords and fibres, over every region and tissue of the body.—[Brain, &c. shewn in casts and preparations.]

This is the great system which gives man his place, far above the vegetable creation, and at the head of all that we know of animated nature. Gradually more and more developed throughout the whole series of beings possessing animal life, it is this system which endows him, or permits him to be endowed, with a sense of wants, on the supply of which his continued existence depends; and connects these with various enjoyments which it is his nature to seek, or with pains which he industriously and ingeniously avoids. Through the impressions made upon this system, and conveyed with a rapidity only equalled by that of electricity or light, he derives from external objects all the pleasurable sensations of colour, of sound, of taste, of smell, of touch, by which he is also at the same time protected. The mind, too, which alone lifts him above all other

creatures,—and all his affections, his volition, and his powers of acting and moving,—are connected with this portion of his corporeal structure, and manifested through it.

It is more strictly in connexion with the exposition I am attempting to remark, that it is apparently by the nervous system that the yet unexplained power acts which imparts motion to the whole of the apparatus of which I have said so much; and that the nervous system is also intimately and most materially concerned in effecting or in regulating all those actions, lately spoken of as being performed at the vascular terminations, and on which the continuance of existence depends. Hardly, then, is it an exaggeration to say, that the nervous power is to the insensible and inert frame—to the dull and unmoving statue—like the vital fire which animated the statue of Prometheus; for it endows the whole mass with sensation, and intelligence, and motion, and expression, and all that we call life.

Not that the student can really be permitted to imagine that he has even yet penetrated to the seat and secret of life, or even that every motion, and action, and process, carried on within the body is explained by what we know of the nervous system. Easy and satisfactory as it would seem to consider it in all cases as the source and origin of all that we observe and admire in the economy of the body, it cannot be concealed that it is not always seen to be so. Its functions are in almost every instance so implicated with the great system of the blood; there is so often a mutual dependence existing between these two great systems; there are such proofs of the sanguineous system being to a great extent independent of the nervous, and yet so deeply is it affected by nervous accidents, that the student must now be warned that he is on difficult ground—warned to observe with diligence and care, and to be most discreet and cautious in adopting general conclusions.

I must not dwell longer on these very general views of structure and function, which perhaps require some apology, before an audience not wholly composed of students. They might be pursued with curious illustration in the nervous system, the gradual growth of which presents one of the most beautiful examples of animal development on which the attention can be employed. What I have already said may at least shew that in our study there is nothing absolutely dry and tedious, nothing which fatigues the memory without exercising the understanding.

Even these elementary studies, which all might enter into with pleasure and advantage, are relieved by others of a very varied kind; and most useful to him who studies either medicine or surgery.

Among these is chemistry, which no medical student, or I would say no student of any kind, should think of neglecting. If I were required to name any single science as the most instructive, the most interesting, and the most useful (of course I speak of physical sciences), I do not know one which could be more safely or justly named than chemistry. The properties of all the simple substances which compose whatever is upon the earth, or which constitute the mass of the earth itself, or which float around and accompany it in its eternal course; the divers combinations of these substances; the varied, surprising, and almost infinite, results of these combinations; and the application of this extensive range of knowledge to innumerable purposes, useful or convenient to mankind, are all explained by this comprehensive science: whilst the continual experimental illustrations of which it admits, the exact nature of the proofs on which all the parts of it rest, and the history of almost every investigation connected with it, afford examples of, and inducements to, that close and accurate attention, and that severe and wary induction, which are commonly supposed to be advantages peculiar to mathematical discipline, but which render the study of chemistry not only that which most contributes to enlarge the student's acquaintance with nature, but one of the most salutary exercises of his mind.

It is only necessary to mention the pursuit of botany as belonging to medicine, to remind you of a recreation of a most welcome kind, which may be enjoyed at a season of the year when comparative leisure is left to the student, and which, leading him to fields and gardens, and to heath and mountain, is perhaps even more delightful than it is, strictly speaking, useful.

If the student has time, and it is much to be regretted that he has not always time, to attend to comparative anatomy, the examination of different animal structures, and the observation of different animal functions, will not only be found an exceedingly agreeable relaxation, but will often prevent hasty conclusions in his reflections on human physiology, and sometimes direct his researches towards new discoveries. It was by observations made on animals that the lacteal vessels, which have already been mentioned to you as taking up the chyle from the intestines, and carrying it into the blood, were first seen; and that Harvey previously attained to the great discovery of the circulation of the blood—a discovery which, besides the brilliant light it shed over the whole field of physiology, first gave any thing like reasonableness to medical reasoning; the doctrines of diseases professed before that period being really little more than curious conjectures.

The science of medical jurisprudence has

just been added to those which the student is required to have attended to, before presenting himself for examination at the Apothecaries' Hall. This is not the only regulation by which the master and wardens of that institution have evinced an enlightened desire to effect such improvements in medical education as the state of society requires; and unconnected as I am with any corporate body in the profession, and unbiassed by any feelings either of prejudice or predilection, I must say that I think these regulations reflect upon them the highest honour, and entitle them to the gratitude of the profession and of society.

An acquaintance with medical jurisprudence can alone prepare the student for the performance of public duties, which, however unpleasant to medical men, are of great importance to the community. This department comprehends, too, a variety of questions of intense interest; the proofs of poison; the causes of sudden death; the state of the mind; the evidences of imputed guilt; and all the subtle means of detecting crime, or of performing that more grateful office, of throwing the protecting shield of science over those who may be so unhappy as to be falsely accused.

In the study of what is called the *materia medica*, or of the materials and substances employed to cure disease, the student has the advantage of again seeing brought before him such parts of the sciences of chemistry and botany as most appertain to medicine.

When I remember my own situation as a student of *materia medica*, in a celebrated school of medicine, and recollect that during the whole winter's course I never saw a single plant, root, flower, powder, pill, tincture, or extract, or any one preparation of a medicinal substance—to become even imperfectly acquainted with which has subsequently cost me no small trouble—I am almost inclined to envy those who begin their studies under better auspices, and where every thing is carefully shewn, and may be deliberately examined.

There is not, in the whole museum of *materia medica*, a single article which does not possess some property that makes it interesting. But the great interest of them all arises from their effects on the human body; and to the medical student, although the separate articles of study in the various collections from which the specimens around me are taken, are each deserving of attention, the great interest of all these, too, arises from their throwing some light on the means of relieving human suffering and prolonging human life.

That which causes all these studies to be ardently pursued as a profession, is the liability of this frame which we have contemplated to disease; and in addition to the studies which have been spoken of, a know-

ledge of the causes and of the symptoms of disease in the human body, must concur to the important object of their proper treatment.

Such a knowledge can only in part be gained by attendance on lectures. It requires assiduous attention at the bed-side of the sick, for which opportunities are afforded in hospitals and dispensaries. No one can pretend to call himself a lover of his profession—no one can hope either for distinction or for comfort in it—who neglects what observation and actual practice can teach him, and who is too impatient to learn from the rich book of nature. To all who take just views of their professional duty, attendance on the sick must be the most constant of their occupations; and, as the Professor of Practical Medicine here, I may take the liberty of assuring the student, that without diligent attendance at the hospital, where alone perfect subjects for clinical instruction can often be met with, or at the dispensary, where a different order of cases generally presents itself, my lectures on medicine must be of very limited utility.

A consideration of the causes of disease cannot but be interesting to all; for all are more or less exposed to them. To the medical student it is an indispensable duty. These causes are very various. The body is exposed to many accidents, which call for all the anatomical knowledge of the surgeon; and to many morbid influences, only to be understood by him who has made himself acquainted with physiology. The variable conditions of the air disorder it. Excess, or defect, or depravement of food, excess or defect of voluntary exercise, or of rest, disturb its functions. It is obnoxious to disease by the imperfections not unfrequently born with the individual, at least in civilized society; or by other imperfections acquired in the course of the changes of function which belong to different periods of life; in early years, when the processes of growth are carried on so energetically in every organ; in adult age, when man is most exposed; and in declining life, when he is least able to resist. Throughout the whole progress of his life, with all its mutations and fluctuations, man is laid open to disease by the susceptibility of the *mind* that is within the bodily frame.

The illustration of these causes belongs to subsequent lectures. Their investigation necessarily makes the student acquainted with all that is known, or that experience has recorded, of the influences exerted on the body, or on the mind, or by one on the other, in every possible combination of worldly circumstance—a subject of infinite variety and extent, admitting of divisions in any one of which the most industrious investigator may find useful occupation, on whatever portion of mankind, and in whatever region of the earth, his investigations are pursued.

All these studies concur to illumine the more obscure department of pathology.

External appearances, or symptoms, may indicate that the body is diseased—that nutrition is impaired—that the circulation is oppressed—that the great function of respiration is uneasily or imperfectly performed—or that the empire of the mind is shaken. Certain appearances after death may shew the changes of structure connected with such symptoms. But these are only the signs and the results of morbid actions; and the science of pathology, without a knowledge of these actions, is incomplete.

Having seen that all the phenomena exhibited in health are the results of actions performed in a certain apparatus of vessels, which vessels are greatly influenced by the system of nerves, the student is naturally conducted, in the present state of science, to the conclusion, that all disease arises from primary irregularity of action in one of these two systems.

When the physiologist shall have ascertained the actions of the ultimate nervous and vascular ramifications in health—following, perhaps, the anatomist, if ever the anatomist shall be able to detect the fine adaptations of the extreme capillaries to the many processes performed in them, supposing the diversity of the processes to depend in part on diversity of ultimate capillary structure, as well as in part on diversity in the principle of nervous action—then, and probably not until then, the pathologist may be able to mark the exact nature of the deviations from healthy action, which constitute the first movements of disease.

But whilst these views may be admitted, it is not to be forgotten, that as the body is liable to disease originating in external injury, so also there are some diseases, and very serious ones, which seem to be produced by a direct injury done to the circulating blood itself; the process of sanguification being in such cases only secondarily and subsequently impaired. In these instances something noxious appears to be immediately imparted to the blood, in consequence of which the whole system of blood-vessels and nerves, and then every function of the body, is thrown into disorder.

Whatever forms disease assumes—inflammation, fever, new formations, deficient or too abundant secretion, imperfect respiration, or nutrition, or mental action, irregular muscular movement—there must always be, 1st, either some original excess or defect in the quantity or qualities of the blood circulating in the organ in which the disordered function first appears, or in organs or parts with which it is connected, either anatomically or by sympathy; or, 2d, there is some alteration in the action of the blood-vessels; or, 3d, there is some defect or excess of the energy which is supplied by the nerves, or some irregularity in the mode, or some im-

pairment in the actual quality of that mysterious supply itself.

It is to these two great systems, then, and often to both, that these must look who are more anxious to understand disease than to establish doctrines of disease that will hardly outlast the lives of the inventors. Nor should the student be disheartened if he finds that the implication of these systems often baffles his attempts to determine in which of them a morbid series commences. He will find, however, that although his knowledge is often imperfect, much has already been gained from observation to direct the practitioner to many successful attempts to allay the morbid actions of both systems, and often even to restore one of them to order by means directly applied to the other.

To pursue observations of this kind any further would lead me far beyond the limits of an introductory discourse. My design in making them has chiefly been to shew the student, at the outset, what is the end, and what the object of his journey, that he may persevere from the first in such a direction as can alone bring him thither in safety.

He may be assured that all the studies which are comprehended in a scheme of medical education are indissolubly connected; that if the first parts are imperfectly attended to, the very last will be affected by the imperfection; and that every effort for the relief of sickness and pain is, or ought to be, directed by knowledge acquired in the course of dissection, or in the school of physiology, or in the laboratory of the chemist, or in the museum of *materia medica*, or in the observation of the general works of nature. No part can be neglected without detriment; and it is therefore fortunate that every part possesses so much to recommend it. The way may not *always* be smooth, or strewn with flowers; but still it leads to that which it is the object of our professional lives to reach.

The reward is equivalent to the diligence and patience which are required. By combining study with practice and reflection, we learn to obviate or to cut short the effects of the ordinary causes of disease, to restore the actions of health, and thus to prolong the various movements of the whole of the machine which is our study and our care, much beyond what would often be their termination. Even as age advances, and the frame obeys the inevitable law by which individuals give place to new creatures of the same species, medical and surgical skill can soften many of the asperities and alleviate many of the worst inconveniences of declining life. More it cannot do. The supply by which the existence of the various organs which compose the body is kept up, becomes less liberally, perhaps less efficiently, prepared; the organs become less capable of their accustomed actions—the nervous

energy is less readily and less equally imparted—the circulation becomes more feeble; the senses become less acute, the affections less warm, the judgment less correct, the will less determined, the movements less vigorous and obedient: some part of the worn-out system commonly fails more than the rest, or the whole of the apparatus which we have surveyed becomes weaker with every additional day of its duration, and at length the actions, and animation, and warmth of the life, yield to the immobility and the insensible coldness of death. The after-part of the corporeal materials is then soon mingled with the general earth and air, and the despoiled and denuded skeleton remains the solitary memorial of the breathing life which once informed it.

After the review which I have taken of the particular studies of those who devote themselves to the medical profession, and of the inquiries which habitually and necessarily engage their minds, it may well be supposed that, generally speaking, the influence of such pursuits on the character of the student is salutary. The nature of the practitioner's duties is calculated to deepen the impressions made by his previous education; for all this various knowledge is, we have seen, connected, in the course of his daily avocations, with benefits conferred upon others. Every respectable occupation which enables a man to live honestly, is one in which he may be happy and ought to be contented. Ours is one which not only does this, but enables those who practise it to acquire the esteem and gratitude of those from whom they expect its common remunerations; so that I really know no pursuit in which a parent may let his son embark with more satisfaction: its studies are liberal, its duties useful, all its objects praiseworthy, and its rewards not often withheld from industry and merit.

The preliminary part of a pupil's education, or his apprenticeship, is that which is commonly considered to be most open to objection; although I am quite persuaded that the evils of it have, of late years, been so much mitigated as almost to remove all objection; and there is certainly one benefit derived during the ordinary period of an apprenticeship which is seldom adverted to—I mean that of its causing some of the most inexperienced years of youth, during which the habits often become formed, to be passed in families regulated with more than usual order, regularity, and respectability.

From a very extensive acquaintance with general practitioners, in many parts of the country, I am fully convinced that no class of society presents so large a number of persons distinguished by devotedness to laborious duties—by an habitual sacrifice of all pleasures that could interfere with those duties—by uprightness of character—by

abstemiousness and general decorum, and by kindness to all who need it. To these claims to esteem, many of them, in the midst of labours which exhaust the mind as well as the body, and which engage them at all hours and allow no uninterrupted vacations, have contrived to obtain information and to make acquisitions of knowledge which entitle them to the high degree of respect, and to the extensive public confidence, which they are well known to enjoy.

It is an honour, gentlemen, and a great advantage, to belong to a profession containing a very large proportion of persons answering to this description, and performing their useful duties without the incentive of any of those dazzling prizes which it is the privilege, though sometimes I think the misfortune, of other professions to possess.

You may readily believe, gentlemen, that this being the general character of medical men, so, in proportion as any member of our profession has leisure or fortune, combined with inclination, he is also prepared by his education to apply his mind to different branches of science and of literature, without neglecting his professional duties. Excellence in any pursuit can only be gained by being devoted to it; and the medical practitioner must devote himself to practice. Some kinds of scientific knowledge, however—as chemistry, botany, and zoology—are, we have seen, closely connected with medicine;—many parts of natural philosophy, and the study of the faculties of the human mind, are very valuable additions to it; and, indeed, hardly any description of knowledge is alien to it. A great number of physicians and of surgeons are fortunate enough to possess the advantages I have mentioned; and the effect is, that in the various ranks of society none are more distinguished by literary and scientific attainments.

Practising a profession in which the greatest and most varied acquirements are made applicable to the relief of human suffering, they do not lose the virtues of the heart in their anxiety for mere mental attainments; but, whilst their names meet you in every path of intellectual pursuit, adorn every column in the temple of science, are yet distinguished by something more to be prized than fame and mental distinction—by that steady, active, and disinterested benevolence which sustains, relieves, and saves the humblest object on which it is exerted; and comforts all, of every rank and every station, under the worst ills and woes of life.

Look round this great town, gentlemen, and see the innumerable establishments in which men of the greatest skill devote that skill to relieve the miseries of the poor. See, as you travel through this island, and through every Christian land, in every town which

rises to a certain size, an hospital raised for the relief of the sick, and for the most part attended gratuitously;—a temple to humanity far more interesting, far more acceptable to the Deity, than all that the pomp of Pagan or of Eastern worship ever conceived or executed.

Go into the abodes of the sick, and poor, and deserted; wherever there is disease, or distress, there will you find some practitioner of our glorious art exercising it patiently, freely, and fearlessly, for those whom poverty, vice, or the breath of pestilence, has deprived of every other friend.

Follow practitioners among the higher classes of patients, and you will find them the friends, and the honest advisers often, of those who can seldom hear truth from any other lips; or ministering to the diseases of the pained and irritated mind, more hidden than malady of the body, but in many cases more serious.

The peculiar duties of medical men have, indeed, caused them often to be the last friends, comforters, and counsellors, of the greatest and the wisest men in the hour of death; and hardly any eminently learned, or good, or great man, has died without testimony to their humanity and worth. "There is no end," says Pope (writing to one of his friends respecting Dr. Mead and his other physicians), "of my kind treatment from the faculty. They are in general the most amiable companions and the best friends, as well as the most learned men I know." Dr. Samuel Johnson, in his life of Dr. Garth, observes, "I believe every man has found in physicians great liberality and dignity of sentiment; very prompt effusions of beneficence, and willingness to exert a lucrative art where there is no hope of lucre." The late Dr. Parr, in a letter to Dr. Percival, written in 1794, says, "I have long been in the habit of reading on medical subjects, and the great advantage I have derived from this circumstance is, that I have found opportunities for conversation and friendship with a class of men whom, after a long and attentive survey of literary characters, I hold to be the most enlightened professional persons in the whole circle of human arts and sciences." It is the more agreeable to me to record this expression, because, thirty years after the date of the letter which contained it, I had the gratification of sharing the friendship of its very learned and able author, and repeatedly witnessed the delight with which he spoke of his medical reading and medical friends, and the particular attentions with which he was pleased to honour his medical visitors—attentions sometimes marked by his characteristic eccentricity, but always stamped with the extreme kindness of his heart.

To recollect the opinions of such men, and to recal the names of Fothergill, Mead,

Heberden, and others, whose very names are synonymous with enlightened benevolence, cannot but attach us more strongly to our profession. The honours reflected upon it by such names and by such praise will never fade; they shed a lustre over it which almost sanctifies it. Such commendations, and such names, should be remembered by the student amidst the anxieties and toils by which superior knowledge can alone be acquired; for he may be assured that, to deserve and to obtain a share in such high praise, and to be ranked with such illustrious men, is not beyond his own power.

Let the medical student, then, be content with his own station. I am much deceived if every year of his life, every fresh opportunity of experience, does not cause him to turn from all the restless and poor ambition so often displayed in other pursuits, with more and more satisfaction to our own quiet walks of science, in which temptations to wrong less abound, and to our own profession, in which the chief ambition is to do good, and every object of pursuit pure and noble.

Gentlemen, I have occupied your attention longer than I intended, and yet have most superficially traversed the great field of study to be more carefully gone over in the different lectures now about to commence in our Medical School.

It is on the facilities afforded for obtaining an intimate acquaintance with these and all other branches of art and science, that this institution founds any claim to public support. The Professors know the responsibility they have incurred, and that the reputation of the University is in their hands. It would be a grateful but a delicate task to speak of the particular advantages which each individual of my colleagues endeavours to afford his pupils, by way of assisting them in following out the plan of study which has been the subject of my lecture. But I have no desire to be considered as having forgotten the praise of science, for the purpose of converting science into a trade. I leave the subject to the observation of the public; and I leave it so without apprehension of the final result.

That this University has already conferred some advantages on the country, none, I think, will deny. Its support and stay is public opinion, and its success as certain as was the necessity for its establishment. It has had to contend with some difficulties—what great design was ever without them? I can conscientiously say that I know of no difficulty besetting it which may not easily be overcome; and its objects are so essentially valuable, every day—the events passing in every land—shew them to be so important, as to leave no doubt that they will in time be fully and entirely accomplished.

I trust, and fervently hope, nay, I con-

fidently believe, that it will be so conducted as to cause its influence to be felt more and more for many ages. Together with similar establishments, differing from it in some particulars, but uniting with it in the great work of diffusing that knowledge which is the best protection and strength of nations, I cannot doubt that it will help to infuse new life and vigour into our social institutions, and to secure to us the quiet possession of those blessings which we inherited, but which, in less enlightened times, were dearly bought on the scaffold and in the field.

To this, and to every institution throughout the land, and throughout the world, which professes a similar object, every real lover of mankind must sincerely and heartily wish success. Those of our own country will tend, I trust in God, to avert from it the common destiny of ancient empires, and to preserve its greatness, its freedom, its tranquillity, and its happiness, as long as kingdoms, as long as nations shall endure.

ANALYSES & NOTICES OF BOOKS.

“L'Auteur se tue à allonger ce que le lecteur se tue à abrégé.”—D'ALEMBERT.

The Laws relating to the Medical Profession; with an Account of the Rise and Progress of its various Orders.
By J. W. WILLCOCK, Esq. Barrister at Law.

[Continued from page 21.]

Surgery in the eye of the Law a part of Medicine.

IN the chapter on Unqualified Practitioners in Medicine, we find the case of the College v. Harrison commented on; and it deserves special attention that the author maintains with confidence the right of the College to recover the penalty from the unqualified defendant, though the latter did evade the issue by pleading that his practice in the particular case complained of was surgical; “for surgery,” by the statute, 32 Henry VIII. which is in full force, “is a special member of physic, and within the legitimate range of the physician’s vocation.”

“It seems to have been latterly considered that the prosecution will fail if it be at the suit of the college, and the practice proved to be within the scope of the surgeon’s department of the medical science; and on that ground the verdict of the jury seems to have been given in the case of Dr. Harrison. Conso-

nant with this opinion was the direction of the learned judge in that case, although his lordship very justly considered the evidence sufficient to shew that the doctor professed to be, and acted as, a physician. But with the utmost deference to so high and impartial an authority, I venture to submit that the earlier cases, and cases decided upon argument in full court, but which seem not to have been noticed in arguing Dr. Harrison's case, are directly and clearly to the contrary.

"In the case of Dr. Laughton against Dr. Gardiner, the statute 34 Hen. VIII. was pleaded by the defendant, which is strictly and exclusively applicable to surgery. The same statute was again pleaded in the case of the Physicians against Butler; the latter of which cases was three times argued before the Court of Common Pleas, and after a decision there, upon the Court's taking time to consider the arguments, it was re-examined on error in the King's Bench. We have therefore two decisions of the King's Bench and one of the Common Pleas on this point: for the confession in each case was exclusively of practice in diseases evidently treated by the legislature as surgical; and the question was on the sufficiency of the avoidance, that alone being met by the replication. Besides which, the statute 32 Hen. 8, has expressly declared that surgery is a special member of physic, and within the legitimate range of the physician's vocation.

"My assumption therefore is, that the action will lie at the suit of the College, although the practice proved be surgical, unless the defendant by his plea show that he is legally entitled to practise as a surgeon, by specially setting forth his license by the College of Surgeons."

The assumption, we must say, is very ingenious, and we have no doubt, had Lord Tenterden been apprised, as he should have been by the College counsel, of the grounds upon which it rests—the passage, namely, in the charter, "*qui habeant supervisum*," &c. and that in the last clause of the above-mentioned statute which states that physic contains surgery "as a special member and part of the same"—that his Lordship would have stated the law of the case differently, and that the Jury should have brought in a very different verdict.

Liability of Physicians.—On the subject of the liability of physicians, Mr. Willcock does not seem to argue quite so ingeniously or so well. He fancies he proves to our satisfaction that physicians are on a very different footing with their patients from that which subsists between a barrister and his clients. In this we do not agree with him; we shall, however, first give the passage to which we allude, and then state our objections:—

"The physician is responsible for his want of skill, as well as the surgeon or apothecary; although the contrary has been surmised, from a comparison frequently instituted between the characters, in this respect, of the physician and barrister.

"It has been said that his fee is honorary, and therefore he is not responsible; and that his profession is to judge of the disease and the remedy, and that the law holds no man responsible for an error in judgment, and therefore he is not responsible.

"But both these premises are erroneous. Even admitting that his fee is honorary, no man would pretend that there is not, between a physician and his patient, as complete a contract for mutual advantage as between any other bailor and bailee for hire; and indeed the fee of the physician is almost always received before he begins to perform his part of the contract, except when he reposes that confidence in his patient which removes all pretence of his being a practitioner without a sufficient right to receive a remuneration. But even admitting that his undertaking to cure is without any compensation, it is not what the law calls *nudum pactus*, which a man is not bound to fulfil; for his open profession of skill and knowledge in the faculty, and of all other acquirements essential to the character of a good physician, has induced a confidence in him, by accepting which he incurs a legal responsibility for every injury arising from his deficiency in those respects. The proposition, that the law holds no man liable for error in judgment, is equally incorrect: it has, indeed, been occasionally laid down to this extent, but must be restrained to the subject in relation to which it was advanced; that is, to persons acting in a judicial capacity, or persons justified by law in forming opinion on the subject: but to persons acting in a private occu-

pation the doctrine will not apply; for the responsibility is not founded on the incorrectness of the physician's opinion, but on his undertaking that on which he is incompetent to form any well-founded opinion. And with regard to the comparison to barristers, it merely suggests a question, whether barristers are themselves altogether so irresponsible as they are generally understood to be. In the case in which the comparison was made, there is no doubt that another tribunal has considered barristers responsible; and the plaintiff was not nonsuit on the ground of the defendant not being liable, but because he had mistaken his remedy.*

Now our objections are simply and briefly these:—1. The case of bailor and bailee for hire does not apply to physician and patient, for legally speaking (and it is *legally* we presume Mr. W. would have the matter considered) there is *no hire* in the transaction; and there can be *no contract* where the consideration and remedy are not mutual. 2. The fee is seldom, if ever, received before he begins "to perform his part of the contract;" he exercises his judgment, and prescribes first, and then has no legal remedy for his fee. He has no *right*, because for the violation of every right the law supplies a remedy; but he has no remedy, and therefore no right which he can enforce. 3. To say that a physician is liable for every injury resulting from his deficiency in skill or knowledge, is to judge of his skill and knowledge by the result, which is absurd in principle and unsafe in practice. Besides an error in judgment is protected even by Mr. Willcock's own shewing, for the physician acts in a judicial, not a ministerial capacity, and he is a person justified by law in forming an opinion on the subject, just as much as a magistrate or lawyer. Admitting him to be incorrect in his opinion, it does not follow that he is incompetent to undertake the performance of his medical functions—he does not undertake to be infallible. And 4. Whatever Mr. W. may think of the cases he recites, and whatever opinions he may have formed of the analogy between barristers and physicians, we *know* that barristers have ever been protected—not a single instance is there to the contrary; and why should not physicians be protected likewise?

Dissection.—But to pursue our analogy.—149.—VII.

lytical observations. The chapter on Dissection is a curious review of the state of the law on that subject, and presents an amusing detail of the numerous phases vulgar opinion has exhibited since the dark ages with regard to the treatment of the dead. Sorcery or magic was the first charge made against the hapless student in whose possession any part of the human frame was detected. The common law judges appear to have been sometimes endowed with sufficient good sense to discountenance accusations so vague and inconclusive*; but the clergy were zealous in the pursuit and persecution of those ill-used persons, under pretence that their learning was derived from supernatural sources. "Hence originated an opinion prevalent until within a comparatively recent period, that to cut or use the human corpse, even for the purpose of acquiring medical knowledge, was a misdemeanor at common law, and that it was equally punishable in the ecclesiastical courts." Mr. Willcock explains well the anomalies which have, and do still, in great measure prevail regarding this topic, so interesting to medical men. We regret that we cannot follow him as closely as we could wish; but it should be known that our author lays down the law very favourably for the schools. We cannot extract all he says on this head; but we must certainly make room for some of his concluding remarks.

"While the statutes against sorcery remained in force, and the judges were imbued with a due degree of superstition, the presumption was so strong,—though no proof of so vague a charge could by possibility be adduced,—that bodies disinterred were removed for purposes of sorcery, that the resurrection-men, and the medical students as their counsellors and abettors, were in imminent jeopardy of suffering as felons, without benefit of clergy or of that sanctuary which they had profanely dared to violate. But they were relieved from this danger long before the repeal of the

* There is a note in the Year-Book, 45 Ed. 3, fol. 17, 6, of which the following is a literal translation:—"A man was taken in Southwark with the head and face of a dead man, and with a book of sorcery in his mail, and brought before Sir J. Kinvet, Justice of the King's Bench; but there was no indictment against him, so the clerks made him swear, that he never would be a sorcerer; and he was delivered from prison, and the head and book were burnt at Tothill, at the charge of the prison."

act of James I. as convictions of witchcraft have grown less common since the time of Hale, and the judges of modern times, even if ready, with Blackstone and Addison, which may be reasonably doubted, to conclude that there had been such a thing as sorcery, have manifested a most decided disinclination to give credit to any particular modern instances of it.

“The notion of the disinterring of the dead being an offence at common law was so nearly connected with the idea of the bodies being used for the dark purposes of the necromancer, that it is impossible to find any distinct authority upon the abstract point in ancient legal records. The whole question must depend upon a proper answer to these inquiries;—is it a violation of property? is it a personal injury to any individual? or, is it an injury to the public? Every lawyer who has mentioned the subject has admitted that there is no violation of property in respect of the corpse itself, which is necessary to constitute the removal an offence: and Blackstone has distinctly stated, that the only property violated is the grass and soil of the land wherein the body was interred, in respect of which the parson may bring his action of trespass; but the law has not provided any punishment as for an offence.

“It is equally clear that it is not an injury to any person; for the shrewd lawyers of Coke’s time determined that the body was no person, but a lump of earth; and the only injury which can give a right of action to—that is, which amounts to a violation of any legal right of—a relative or master, is such as may be said to recoil upon him, by causing him expense, labour, or loss of valuable service. The unpleasantness which may arise from an attack upon prejudices, however intimately blended with good feeling and delicacy of sentiment, is ranked by the law with that class of wrongs which are technically designated *damna absque injuria*.

“The judges in the case of *Lynn*, in considering the act an offence, assumed to answer the third question; that is, to assert that it is an injury to the public; for, however contrary it may be to good manners, it is not an offence against the law, unless it be injurious to the welfare of society: and even admitting that every affront to common decency is an injury to society,—which

may be too great a concession in case of acts from which, though in some degree disgusting, society receives more than an equivalent advantage,—it by no means follows that the disinterment of bodies is an offence. We may sometimes detect, in the decision of the most upright judge, a prejudice, and thence a necessary partiality, of which he is himself utterly unconscious. And so in this case, the delicacy of sentiment in the judge—the most amiable excuses for error—seems to have precipitated the decision.

“There are many acts of necessity which should be concealed from the public; many acts which, openly done, would outrage common decency and tend to the degradation of society, which may, however, be done with a proper degree of privacy, so as to neither injure nor offend; and among these, the disinterment of the dead, for the purpose of advancing that knowledge which is absolutely necessary to the welfare of society, must undoubtedly be included. Not merely the comforts, but the whole happiness, the life of man, depend upon the acquisition of that knowledge which can be derived only from the use of the last reluctant legacy of those who have preceded to the grave. Society is not injured, for it could hardly exist without such a sacrifice of fastidiousness; society is not insulted by the secret abstraction of the corpse from the vermin which crowd to pollute it; and they who so curiously seek the remains of those they hold dear, behind the veil of science, would do well to pry for one moment into the secrets of the sepulchre.”

We shall probably notice some other topics in this volume on a future occasion. At present it only remains to be said, that the selection of cases in the second part seems judicious: they will be found often amusing; and they come down to some of those most recently decided: *Handey v. Henson*’s case is duly noticed. There seems, however, to be an unaccountable omission of some others, which we should willingly see recorded here. Perhaps they have not been preserved by the regular law reporters: *Harrison*’s case is given from the MS. in the College; and *Rolfe v. Stanley* is not once alluded to. But Mr. Willcock’s volume, on the whole, is a most valuable contribution to medico legal literature. Every member of the profession should have a

copy: if he value his rights and privileges, his reputation, and his rank in society, he will not be without this legal monitor. It is a work of much research, and must have cost the author infinite pains: the documents alone which he has put together in the second part would have formed a useful compilation; but the learning and talent displayed in the preliminary digest give the volume a character of originality and excellence not usually to be met with in similar productions.

CLINICAL OBSERVATIONS

ON

WOUNDS PRODUCED BY FIRE-ARMS.

By M. DUPUYTREN.

[Continued from page 9.]

WE do not think it necessary to repeat all M. Dupuytren's observations relative to the course of musket-balls in indieting wounds; but, perhaps, what he said of these projectiles describing complete curves and running round certain parts of the body, may be interesting to the reader. A ball which strikes the chest in front should pass through, and come out posteriorly, were it to describe a straight line; whereas it sometimes passes out laterally, sometimes by the back, and that without having penetrated the chest at all. This is an incontestible fact, and numerous examples of it have been witnessed in the Hotel Dieu. Two or three years ago, a notary's clerk, in a duel, received a ball in the anterior part of the chest: it passed out behind, and seemed to have traversed the cavity. He died, and it appeared beyond a doubt that the ball had only run round his body. In 1814 numbers of soldiers were shot in the front of the head, and the balls came out by the occiput without passing through the skull.

With a view to ascertain whether the public buildings struck with balls in the late conflict would throw any light on this peculiarity, M. Dupuytren carefully inspected the columns of the Institut and the Louvre, which were plentifully besprinkled with those projectiles. Had the balls in any instance described a fourth part, or a third, or half the circumference of any of the pillars, it should have been perceived; but there was no such appearance. At the Louvre,

where the columns are fluted, observation of any such trace could only be made behind the flutings; but neither was there any mark there. At the Hotel de Ville it was the same thing. Yet how is it so certain a fact that man's body is acted upon so differently? It is thus accounted for. When the front of a column is struck obliquely, the ball meets with no resistance in its oblique reflection except the air—a resistance insufficient to prevent the ball from flying off. In the case of the human body, the bones are coated with soft parts, muscle, aponeurotic tissues, skin, and the like; and the skin alone, by its fibrous density, and above all by its elasticity, would be amply sufficient to check the ball. The difference of the media, then, through which it has to make its way, will account for the difference of the course: in the case of the pillar, it passes from a dense medium into one that is not so; in the other case, it penetrates through the two tissues of considerable density. The bone not being pierced, the ball, instead of being reflected in an angle greater or less according to the incidence, assumes a compound path—between a right line and a perfect curve. If the ball possesses great impulse, it traverses but a sixth, fourth, perhaps only a third of a semicircle; if it be less strong, it goes further, and probably departs at the point diametrically opposite.

M. Dupuytren now proceeded to describe *the effects of spent balls, with their treatment*. Spent balls have their name from the circumstance of their not reaching the parts until they have just finished their course—their momentum being diminished, perhaps, by various obstacles. If a ball be reflected several times from the ground, making what are called “ducks and drakes” with it, its force is weakened before it comes to the end of its journey; and it is under these conditions that it produces on the body those bruises of which we are about to treat, with their primitive and consecutive effects.

Contusions of a similar character, it may be observed, may be produced by other means: a violent blow on the head, for instance, by a stick—and the resemblance in this case is so strong, that no difference is perceptible either in the appearance or consequences of the injury. A kick from a horse, too,

especially if he be shod, as well as different mechanical powers, may produce injuries of the same description. Now, the least effect resulting from an injury of this sort is a bruise, with rupture of the small vessels, and an ecchymosis more or less evident in the skin; but all this may be unattended with disorganization, the parts are not mortified, a struggle still subsists between their life and death, and art may interfere with advantage. But in more severe cases there is disorganization: the skin is then of a deep violet colour, insensible, cold, and if not lacerated, a solution of continuity will at least ensue after a little time. This solution is a result of the vital energy—the work of eliminative inflammation—which art can do no more than merely prevent the further progress of death in the parts. Few or no opportunities have occurred just now of witnessing effects of this kind, the distance in general between the combatants being so short; but in 1814 a great number of cases occurred: the troops fought then at the usual distances, and accordingly we had here in the Hotel Dieu many soldiers whose loins were brushed. Mortification, however, was not in these cases immediate; but it soon set in, and the whole of the back and loins were entirely stript: in some examples, the soft parts alone suffered—in others, the hard parts participated in the destruction. A soldier was struck in the haunch with a spent cannon ball, that took him very obliquely; a violet-coloured ecchymosis was observed on the integuments, which were cold and insensible: on pressure over the crest of the iliac bone, a sensation was felt like that from pressing on a bag full of pebbles. The patient sunk under it, and on examination it was found that the iliac bone was broken into a quantity of small pieces, which were gathered into a mass that lodged itself between the muscles of the thigh and the internal iliacs. The same effects may be produced on the head and chest—but patients invariably die under these.

An opinion has gone abroad, sanctioned by some respectable men of the profession, with regard to the effects of balls which have not touched the body. M. Dupuytren thinks it is entirely a mistake. He has no faith whatever in the effects of the wind of a bullet: though it pass within a line of the parietes of the abdomen, chest, or

head, not the least effect will be produced without actual contact; though a bullet should pass within a line of the air passages, either in the act of inspiration or expiration, the function will be no wise interfered with. What is usually attributed to the wind of a ball, is owing to the very oblique action of the projectile; and M. Dupuytren is of opinion that if the injuries of persons who sunk under affections of the kind, without external marks, had been properly examined, severe derangements in the functions or substance of the viscera, ecchymoses or lacerations, would have been discovered; in short, in every case appearances enough to account for death by the disorder of the powers of life.

In treating of the consequences of spent balls, M. Dupuytren distinguishes them into two kinds or degrees. In the first, the life of the part is not yet extinct; but according to the age of the patient, his constitution, or the remedies employed, it rallies or fails. The best remedy in cases of this sort is that which keeps up the vital energy of the part. Acetate of lead with dilute spirit is an excellent application. If the symptoms of mortification be very obvious and urgent, the spirits are better without the acetate of lead.

In the second kind, the life of the parts is in a most precarious state, and is very seldom effectually restored; but it is possible to fix a boundary to the progress of death, and simple or camphorated spirits and other stimulants, may be employed usefully. Tonics and cordials too may be taken internally; and the general excitement thus produced will have good effect upon the local injury. If it be not possible to rally the powers of life, the process of eliminative inflammation will separate the dead parts: at first the gangrene is limited, and life subsists in the neighbouring parts, but in two, three, or four days, death prevails, and life disappears; and thus there may be in some cases perceived two or three deaths, two or three successive eliminations.

But though the progress of the disorganization may have ceased, it does not follow that life is so completely restored as that the parts are not liable to a particular kind of affection, which occurs as well without as within hospitals; it has got, however, though improperly, the appellation of the *hospital sore* or foulness. Under this ailment,

many victims sunk in 1814, and *then* the wards were really encumbered, and the sore might very fairly be attributed to the crowding and the bad air; but at present, when half the beds are vacant, and the patients kept at such a distance from each other that the atmosphere cannot be polluted, we cannot of course attribute to those causes the examples of hospital sore which we have among us. In the case of one patient who had half his hand carried off by a heavy shot, the wound was large, contused, and lacerated; yet though he is a young and vigorous man, and there are but three patients in the same row with him, nor is there any bad smell from the wounds in his vicinity—the sore has made its appearance in him, and clearly can be attributed to nothing else than the deep shock sustained by the vital powers in the infliction of the wound.

The same ward holds another patient who was struck obliquely by a ball; a slough ensued. The wound looked well at first, but has now become greyish, and an inorganic matter is deposed upon it—a sort of thick matter mixed with a serous fetid suppuration. In addition to this, there is a general heat and burning of the whole system while the foul matter is forming; and the patient is tormented with sleeplessness, fever, and looseness of the bowels.

Now the weather has been fine, and the patients alluded to are young and vigorous, their beds are far asunder, and it is useless to look for the causes of the malady in any of the commonly supposed circumstances; but if we note well that all who have been seized with the sore have had wounds more or less contused, it must be allowed that the contusion, in occasioning a partial destruction of the parts, produces or greatly favours the occurrence of hospital gangrene.

Much has been said and boasted of the efficacy of the chlorurets in diseases of this nature; but though convinced of their utility to a certain extent, it must be stated that we have often known them to fail. The remedy which we have found most efficacious, is a lotion composed of a little nitrate of mercury dissolved in an excess of nitric acid. "Treated with this, of the two patients just mentioned, one has been cured, the other is in a fair way; but it should be added, that the lotion has been repeatedly employed.

But to return: when the eschars fall off, the vitality of the parts is resumed, and no other treatment is required save that which is employed in the case of ordinary wounds; it will be found, however, that in consequence of their origin, those wounds from fire-arms are more tardy in cicatrizing, and more strongly disposed to hospital gangrene than any other sort of injuries.

When the bones have been bruised, the injury is very serious; but how are we to act in this instance? Should the parts be removed with the knife, or left to themselves? If there be even the least portion of vitality unextinct, and any remnant of heat and sensibility still perceptible, it were well to abstain from all incision; but if a collection of pus or blood subsequently make its appearance, threatening the skin with deep and extensive destruction, then it will be proper to relieve nature by a timely incision. But where the injury is less serious, and incision for the purpose of relieving the parts from collected blood is commonly recommended by some, as a necessary expedient to save them from destruction, whilst others fear to employ this mode of relief, lest greater injury should be done by the contact of the atmosphere.—M. Dupuytren thinks it the best plan to allow life to mark out its own boundaries, and to employ incisions only when this admirable process of nature does not take place. When the bones are shattered, the same course must be adopted; not only to permit an egress to the fluids, but to the pieces of broken bone. If nervous symptoms supervene, arising from the contact of splinters with some nerve that traverses the wound, incision cannot be delayed; and the employment of chloruretted injections may be had recourse to with advantage, in order to resist the progress of decomposition.

M. Dupuytren recurred to the subject of contusions from spent projectiles; having some additional observations to make on the primitive and consecutive effects which result from them. Presently, upon a severe contusion of the chest, loins, or belly being received, stupor occurs, and swooning, from which it is difficult to recover the patient; and after he is recovered, he most likely sinks under the debility, the vomitings, the shiverings, and the fever which follow; if he do not, he scarcely escapes the consecutive injuries of dis-

organization. A struggle between life and death, in fact, takes place; if life prevail, the parts live—if the contrary, death ensues, sloughs are formed and removed by the process of eliminative inflammation. Abundant and illaudable suppuration, *the sore*, fever, shiverings, and colliquative diarrhœas, are some of the other results. The lungs, too, become embarrassed; there is dyspnœa, and on examination after death large collections of pus are almost always found in the viscera, the liver, the lungs, and, more rarely, the spleen. An important question here naturally arises—are these collections the result of local inflammation, or are they carried to the parts by the agency of the veins and lymphatic vessels? But, however it be determined, the fact of the collections is one of the most constant occurrences in ordinary practice.

A projectile, whether a common ball or heavy shot, which, in a spent condition, strikes the belly, or chest, affects not the covering of the bones only—the organs contained in those cavities are frequently affected also. The same consequence is found to result from the *very oblique* percussion of a ball. It often happens, indeed, in cases of this sort, as we have already mentioned, that there is no visible external injury, whilst the viscera are violently contused and disorganized; and this accounts for those sudden deaths which, in so many instances, have been observed.

sive ramifications of medicine, surgery, pharmacy, and midwifery, have been aptly denominated “General Practitioners.” The epithet, as distinguished from the appellations which designate those individuals who devote themselves to one branch only of the healing art, is as honourable as it is descriptive; inasmuch as it denotes the possession of qualifications adequate to all the emergencies of an arduous profession. It has, however, been said, that, in its relation with the titles of “physician” and “surgeon,” the term “general practitioner” implies a *subordinate* in the social and intellectual ranks of the republic of medicine; but such an inference is at variance with the spirit of the designation, and presents a forced acceptance of its sense, to which no individual of the class will subscribe. It will hereafter be the duty of the Association now established under the denomination of “The Metropolitan Society of General Practitioners,” to discuss the subject, and, after due examination and deliberation, to confirm this or adopt another cognomen. It will also be the province of the Society to institute an inquiry into the expediency of equalising the right to professional distinctions, and to adopt such policy as shall secure for its members the civil and literary respect to which their education, attainments, and practice, entitle them.

The position in society occupied by general practitioners, is one that demands their serious attention. Perplexed by multifarious duties—threatened by extensive responsibilities—oppressed by physical exertions—disturbed by conflicting interests—assailed by jealousies—harassed by intrigue and envy—injured by corporate privileges—insulted by legal enactments—and degraded by an opprobrious mode of remuneration,—the general practitioner has more extensive evils to cope with than he can hope to combat successfully by the unassisted force of his own mental and physical exertions. It is, therefore, a subject of astonishment, that the members of a class, around whose banner more than ten thousand individuals are spread over the cities and provinces of England and Wales, have not sooner coalesced, and formed themselves into a deliberative body with executive authority and means, in order to render the knowledge, experience, and re-

ADDRESS
OF THE
METROPOLITAN SOCIETY
OF
GENERAL PRACTITIONERS IN
MEDICINE, &c. &c.

An association has been established in London, denominated “The Metropolitan Society of General Practitioners in Medicine and Surgery throughout England and Wales,” the nature of which is developed by this, its first code of laws, whilst its more general intentions and objects are briefly explained in the following statement.

Medical men in this country, whose services are dedicated to the practice of their profession through all its exten-

sources of the entire mass available to every member of the Association, who might seek or require its advice or support. By such an union, a concentration of the opinions, experience, talents, and influence of the whole class would be consummated, and its application directed, upon all occasions, to the necessities and emergencies of any individual; or to the promotion of the collective interest of the whole body. In aid of a co-operative system like this, the support derived from a pecuniary fund is not to be overlooked; in fact, it is an indispensable requisite for carrying into effect any political or legal undertaking—for defending individual interests—and for supporting a domiciliary establishment, which, to ensure success to the scheme, should offer, not merely a place for the conduct of business, but the conveniences for agreeable social intercourse.

Upon the foregoing principles has the Society of General Practitioners been begun; its prosecution may be understood by the following details:—

In the selection of a house for the Society's use, the Committee have been influenced by a prudent regard to economy, and a desire to restrict the extent of the chambers to the actual necessities of the Association. The Committee did not consider it justifiable, in the onset, to open an establishment upon a large scale, purposing to extend it whenever an increase of the Society's numbers renders it necessary, or the members themselves may call for further accommodation. Such refreshments as can be prepared under the present circumscribed fitness of the premises, are served (at a moderate charge) at any time during the day, by the persons in attendance. It is in contemplation, however, to provide dinners and other refecton, as soon as the magnitude of the Society will warrant the adoption of a plan for combining the comforts and conveniences of a social club with the more solid advantages to be derived from the Institution. The reading-room is open from ten o'clock in the morning till ten at night, and the daily newspapers, periodical journals, &c. regularly laid on the table. Notwithstanding the library offers at this time but a limited allure-ment, the Society has cause for congratulation in the prompt and handsome manner in which many eminent indi-

viduals, not belonging to the Association, have presented their works. The members of the Society also, have not been tardy in offering their respective donation of books. The library will be opened as soon as the necessary arrangements are completed.

The Committee have great pleasure in announcing that the Treasurer's statement of the Society's affairs shews a balance of cash in hand; and they take this opportunity of giving a pledge to its members and to the profession at large, that they will, on no account, incur any liabilities beyond the actual resources of their funds.

The pleasure and advantages to be derived by the metropolitan surgeons from the social and friendly intercourse established and confirmed through the medium of their chambers, are too apparent to need any comment; to the country members, also, they present a most convenient place of resort during their occasional sojourn in London, where they may meet their professional friends, mix with their unknown contemporaries, and, at leisure, contemplate the men, books, customs, manners, opinions, and feelings, of the medical microcosm of the metropolis. The associates, likewise, join in these literary and social meetings, forming and cementing those professional ties and private friendships which ought to subsist between all the members of a liberal profession. To the student in medicine, also, the Society's chambers afford peculiar advantages. He is supplied with books either of reference or general instruction; he has the accommodation of a comfortable room for meeting his friends, for his moments of leisure and relaxation, or literary studies; and, lastly, in addition to the mental and scientific improvement which he derives from attending the discussions of the Society, he associates daily with his seniors in the profession, from whose conversation and communications he receives both pleasure and instruction.

The amount of the annual contribution, in comparison with the advantages to be derived from it, has been fixed at a very moderate sum, the Committee feeling assured that the numbers of the Society will be equal, even at this small ratio, to the production of a fund amply sufficient for all the purposes required. The first care of the Society is the conservation of its own integrity, and the

general interests of its members. Medical politics have decidedly taken a bias unfavourable to the general practitioner, and he stands, not only unprotected in his professional character by the fostering hand of a generous government, but legislative enactments have actually been passed which oppress and degrade him; his privileges are trampled down by the assumptions of unjust, self-created, arbitrary power, and the defence of his rights confounded by the hazardous jurisprudence of legal misrepresentation. These great and crying evils can only be redressed by parliamentary influence; and the chief strength of the fund arising from the contributions of the members of this Society, lies in the power which it gives of appealing to the legislature, and of persisting steadily against oppression and opposition, until the general practitioner shall have obtained a distinct and legal recognition of his rights, privileges, and rank, and have burst every trammel that binds him down to a degraded subserviency. These are measures which the Society is pledged to pursue; the period of their commencement must, of course, depend upon the possession of means, and be fixed by the *fiat* of deliberation. For the purposes of individual protection, the fund will at all times be available in every instance where, upon due inquiry and examination, it shall appear to the Society, that one of its members sustaining any injury or wrong in his professional capacity, or is called on to assert his right, or defend his interest on any point that applies strictly and especially to the whole body. The subject of professional remuneration is of momentous urgency, and demands the most careful consideration. It is true that under the direction of the Lord Chief Justice Tenterden, a verdict was lately given in favour of the right of a general practitioner to charge for his services; but such a decision by no means necessarily becomes a law of the land, and though dictated by the opinion of one judge to-day, it may be reversed by the *dictum* of another to-morrow. When the Society shall have arranged a scheme for regulating a general mode of professional compensation, by which the medical practitioner may be emancipated from the odious necessity of balancing his remuneration by the charge for his medicines, it will be necessary to le-

galize the measure by an application to parliament. In fine, the fund formed by the annual contributions will enable the Society to prosecute measures for obtaining such legislative interference as may be necessary in removing all disabilities, for the protection and support of the interests and welfare of its members, for bringing into operation those suggestions which the fluctuating influence of circumstances may give rise to, and for establishing the respectability and prosperity of the general practitioners of this kingdom.

The plan of the Benevolent Fund differs from any other heretofore established*, being founded upon the principle of general benevolence. To the members of this Society, whose circumstances preclude them from providing for the contingencies of accident, old age, and death, it must surely be a consolation to contemplate a resource for such periods of desolation, whilst the more favoured individuals, whom fortune has placed above the necessity of such aid, will not withhold their support to the efforts of humanity. It is, therefore, confidently trusted, that the voluntary donations of all classes of persons will not fail to produce a fund adequate to the benevolent intentions of its philanthropic contributors, in aid of which the surplus of the general fund will be added to it as often as it exceeds the sum necessary for the exigencies of the Society.

To promote the objects contemplated by the founders of this Society, its members, wherever situated, are invited, at all times, to an unreserved communication of their opinions and wishes. By this means a splendid system of general co-operation will be established throughout the kingdom, and remedies devised and applied for evils of every sort, whether local or universal, individual or collective. In furtherance of the measures for improving the science of medicine, it is requested that the members will transmit to the Society in London, such papers, reports of cases, and other professional information, as they may consider conducive to the improvement of knowledge and the good of the public. The more important communications will be printed, as the "Transactions" of

* Extending relief to medical men who do not belong to the Society, and are not subscribers to any fund.

the Society; and as the literature thus collected will be regarded as the joint property of the association, it will be published for the benefit of its members, merely at a remunerating price for the expenses incurred.

Such are the principles and intentions of a Society to which all the general practitioners in the kingdom should attach themselves; and every individual of the class is hereby invoked, by the respect which he bears for himself, and the regard he entertains for the honour and interest of his profession, to give his aid in promoting the formation of an institution for establishing the prosperity and happiness of the medical community.

"Ex veritate causa pendetur."

By order of the Committee,
HENRY BOND, Secretary.

Society's Chambers, 4, Regent-Street.

MEDICAL GAZETTE.

Saturday, October 9, 1830.

"Licet omnibus, licet etiam mihi, dignitatem *Ar-tis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

THE NON-MEDICAL PRESS.

It is interesting, and at the same time not a little amusing, to witness the efforts of some of our non-medical journalists to keep in the wake of science—attempting to manage questions of no great pith or moment with a most marvellous display of their weakness, yet their willingness—their deficiency, yet their courage. We have latterly noticed from time to time editorial articles on medical topics in many of the leading journals of the metropolis: certain disquisitions on quackery, on the study of anatomy, on the Coroner's qualifications, on the powers of the medical corporations, and such-like subjects, evidently taken in hand on the well-conceived presumption of their popularity, and it is gratifying to find

that the discussion of such topics is become popular. It were somewhat strange, indeed, if in the diffusion of knowledge which is now generally going forward, medical polity and the external circumstances of the profession, with its collateral branches, as well as medical science generally, were not in a considerable degree familiar and favourites with the public. The part, however, which the press assumes in the matter, confirms us in our impression; for it is well understood that the public press follows as frequently as it leads popular opinion; and the discussions to which we allude have become too prominent of late to escape unnoticed.

But what principally induces us to make this remark is the circumstance of having met with sundry editorial paragraphs in some of the daily journals last week, which appeared to be managed with a zeal beyond the discretion, if not the ability, of the writers. In a morning paper (the *Morning Herald*) we read a dissertation on the propriety of the office of Coroner being filled by a medical man; and the argument (such as it was) was conducted most strenuously in the negative. From what we could gather of the writer's sentiments, he seemed to us to admit that medical knowledge was of the highest value in a Coroner; but he contended that it would be as absurd to choose a mere medical man to the office as a mere lawyer. Nor was this all: the medical man of the two, would, according to him, labour under the greater difficulty, and this from a necessary want of knowledge of the laws of evidence. The Coroner's office, he goes on to say, is *not* judicial, in which he happens to differ diametrically from Blackstone, and all others who have treated the subject expressly. But he winds up the tissue of his verbiage with a joke (witty, no doubt, if we

could but understand it) about Lord Tenterden writing a prescription, or delivering a lecture on morbid anatomy, and Sir Henry Halford presiding at Nisi Prius, or the Old Bailey. This is really too good: 'tis only a pity, though, it is so destitute of point or propriety with respect to the question at issue, which, as we apprehend, is not who should do the other's office better or worse, but who should do best a thing out of the *immediate* province of either—whether, in fact, Lord Tenterden without a medical adviser, or Sir H. Halford without a legal assessor, would perform the office of coroner the better. And this we presume to have fully answered in our late leading article on the Office of Coroner.

Another learned article to which we would draw our readers' notice was one which appeared in the *Sun* of the same evening. It was made up of reflections on the state of practical anatomy, deploring the hardships under which anatomists labour—that, in order to pass the College of Physicians or Surgeons, it was essential to have dissected, while if any person were discovered performing this necessary task, he was amenable for misdemeanour in the eye of the law. All this, to be sure, is very true, but it is not very new. There is nothing remarkable in the whole thing except the betrayal of the writer's backwardness in respect to the actual state of information in the world concerning those topics of which he would fain treat; he seems, in fact, to have awaked from a long nap. The readers of the *Sun*, it may be said, find novelty in the statements—they do not read the Medical Gazette; but the Editor has no such excuse; he *does* read the Gazette—we fancy. Now we think of it, we recollect that we are indebted to this learned person for some special complaints bestowed on ourselves lately; and should have returned the favour without delay, but for some more press-

ing business that interfered, besides that we were not impressed with the notion of our having much to answer; it would keep, we thought, very well. Upon referring to the article in question we find it a very poor thing, less worthy than we could have conceived of receiving any comment of ours; but we shall not pass it by altogether in contemptuous neglect, or without some castigation. The writer would deserve something of this sort richly for his ungrateful acceptance of our advice and correction: we had taken occasion to set him right as to the extent of the powers of the medical corporations, and, forsooth, because he (the writer in the *Sun*) was specially alluded to, he must take it in dudgeon, and fain "would break a bulrush on our shield." This swaggering, however, weighed as little with us as did the abuse with which he opens his impudent and gratuitous assertion of our connexion with the College of Physicians. But whatever wish we might have entertained to reply to the writer as we went through his paper, the edge of our severity was completely removed as we arrived at the puerile remark which he utters in conclusion. The whole of the last paragraph, indeed, is so silly that its simple citation will be its strongest exposure:

"In reply to an insinuation of this writer, we assure him we do mingle our private feelings with our public duties, and conscious of our honesty in both cases, we do not fear to find any contradiction in our conduct. Is this gentleman afraid, that if he spoke his private feelings, they would be found in contravention of his public duty to his employers? But if he means that we indulge any party medical feelings, he is mistaken. It has been our good fortune to have but little acquaintance with Physicians, and however bad our taste may appear to the Editor of the Medical Gazette, we have no wish to extend it."

To his other weakness and deficiency

this person evidently adds a most deplorable want of candour. He cannot but know that it was the admixture of rancorous personal reflection we deprecated, and not simply the introduction of his private feelings into the discharge of his public duties, and from the former we shall certainly not now acquit him. Whatever he may pretend, in fact, about his freedom from medical partiality, we must only remain still persuaded more strongly than ever of his incompetency for the task he assumed, at the same time that we allow him all due credit for his devotedness to the cause of *his* "employers."

OUR ENSUING VOLUMES.

In the volumes of our Gazette for the season 1829-30, we presented our readers with an extended and valuable course of Lectures on Surgery, and it is our intention that those for 1830-31, shall contain a corresponding fund of information on medicine, so as to form a complete series of lectures on the two great practical branches of the healing art. With this view we have made arrangements for publishing Dr. Elliotson's Lectures on the Theory and Practice of Physic; beginning the course in our present number. We have also the prospect of communicating much valuable information from other sources; the only one of which, however, that we think it necessary to particularize, is the portion of Mr. Brodie's course of lectures which we promised last year, but which we were prevented from obtaining in consequence of that gentleman's attendance on his late Majesty; which led to some changes in the order in which certain parts of the course were given by him and Mr. Hawkins respectively, and thus rendered our arrangements nugatory.

CASE OF

INTESTINAL CALCULUS TERMINATING IN PERFORATION.

By ALEXANDER GRAHAM, Esq. Surgeon,
Polmont Cottage, Falkirk.

THOMAS BROWN, aged 21, a miner, of sanguine temperament, had been from his infancy liable to occasional darting pains in his bowels, attended with obstinate constipation and loud rumbling noise, so much so, as to have been distinctly heard by his neighbouring workmen at a great distance for several years past. These symptoms, his parents say, were particularly observable after an attack of measles, which he had when four years old. The pains gradually increased in severity, and by last autumn became so violent as to render him unfit for work for several days at a time. About this period he discovered a swelling in the right inguinal region, whence he thought the pains arose. In October, when I first saw him, he was considerably emaciated. The tumor was about the size of a hen's egg, hard, circumscribed, and tender when touched. The abdomen was otherwise soft, and free from swelling; the pulse natural; the tongue whitish; the bowels costive; and the urine healthy. Considering it a case of diseased mesenteric glands, local bleeding, blisters, and gentle laxatives, with milk diet, were ordered, but without benefit; and as the tumor still increased, and assumed a suppurating appearance, with feverish pulse, fomentations and poultices were applied. Some time in February, deep indistinct fluctuation was perceptible in the part, and I stated to his friends that I thought, by continuing the warm applications, I should be enabled to open the tumor in a few days.

On the night after my visit, however, the pain, which had been for several days dreadfully severe, suddenly ceased, and he was instantly seized with a violent purging, of very offensive smell.—The stools were found to consist of purulent matter, mixed with streaks of blood. He felt greatly relieved, and the swelling decreased considerably, but retained its hardness. His relief, however, was of short duration; for in less than a fortnight the pain again returned, and the tumor increased in size. By

this time the fever had assumed the hectic character, and he was harassed with colliquative diarrhoea. Local depletion, blisters, issues, and alteratives, were again tried, but without any alleviation of the symptoms. He had occasional days of comparative ease, which were observed to commence after the pains had been for some days constant, with a sudden increase of the purging, and a feeling as if something had given way within him. From this, and from the nature of the dejections, which were at these times observed to contain more pus than when the pain was constant, it was evident there was a suppurating surface in the gut; but what the tumor consisted of, neither the other medical gentleman who attended him, nor myself, could ascertain. Vomiting and serous effusion into the cavity of the abdomen were now added to the list of fatal symptoms. The pain stretched more to the left side, and the swelling became irregular and less defined. On the morning of 29th May he was suddenly called to stool, and while up expressed himself as if "his bottom was coming out." When laid down again, he said he felt as if his "belly would burst," and complained of most excruciating pain over the whole abdomen, which suddenly became tense, and very tender to the touch. He expired in the greatest agony at eight o'clock in the evening, being quite sensible to the last. His urine for a few days previous to his death was turbid, and deposited a lateritious sediment. The only medicine which afforded him any relief was opium, which he had used for upwards of two months.

The body was examined twenty-four hours after death; and I was kindly assisted by my friend Mr. Main, of Falkirk.

The abdomen was so much swelled and tense as to prevent any particular tumor or hardness being perceptible when the hand was applied to it. On opening it a great quantity of very foetid air escaped. The peritoneum and small intestines—except in being of large diameter, and perhaps a little paler than natural—were of healthy appearance; they were much distended with flatus, and quite empty of feculent matter. On making an incision from the umbilicus to the anterior spinous process of the right ilium, a considerable quantity of thick purulent matter, of a most offen-

sive smell, escaped from an opening about an inch in diameter, situated on the anterior surface of the colon. There were no adhesions betwixt the intestines and parietes of the abdomen. Carrying the fingers through this aperture, a calculus of a flat square shape, an inch and a half long, and half an inch thick, was found lying loose in the gut, surrounded with pus. After this a second and then a third were removed, each of larger dimensions, but of similar figure to the first. Lower down towards the rectum, a fourth calculus, of an irregular roundish shape, about the size of a pretty large potatoe, was found. This was not in contact with the former ones. They were all lying loose, surrounded with pus, without any sac. On their surface were found several oatmeal seeds, which the patient had got in gruel a few hours before death. Having removed all the small intestines, which were floating in serum mixed with pus, we found about twelve inches of the colon in a very diseased state. The mesocolon was of a purplish colour, and very easily lacerated: the conglomerate glands numerous and enlarged. The coats of the gut in this place were much thickened and indurated, the mucous membrane being ulcerated in its whole circumference. At the caput coli the intestine was puckered and contracted, so as to admit with difficulty the tip of the little finger. The contracted portion measured an inch deep, and the mucous lining for more than an inch below this was also ulcerated, although the gut here was less indurated and not so thick. The rectum, proceeding downwards, appeared healthy, but of small diameter throughout. We distended the urinary bladder with air, when it was found quite healthy; as were also the kidneys, ureters, and other viscera.

The four stones, when weighed the day after they were removed, amounted to five and a half ounces, but have since lost two and a half ounces. The large one measured on each side two and a half inches, being eight and a half inches in circumference. It lay close upon the contracted part of the gut, being detached from the others. Both its upper and under surfaces are hollowed out into a cavity, having the appearance as if it had once been perforated. The three small ones were in contact with each other, the middle one having two flat surfaces. The smallest one mea-

sured four inches in circumference; the next five, and the third six inches. The friends allowed me to take home the whole diseased portion of intestine, which I have preserved. It is laid open, exposing the internal surface till it reaches the contraction, which is finely exhibited; as is likewise the aperture through which the matter escaped into the abdominal cavity, being the immediate cause of death.

One of the concretions was examined by Dr. Christison, who found it to consist of the same materials as the most common intestinal calculus in Scotland. It was composed of several concentric layers, some of which were thick, brown, soft, velvety, and formed of a congeries of small vegetable fibres, closely impacted together in the usual manner, while the alternate layers were thin, white, hard, and composed chiefly of phosphate of lime.—*Edin. Med. and Surg. Journal.*

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

EDINBURGH SURGICAL HOSPITAL.

Cases of Excision of Elbow-joint.

JOHN MALLOCH, æt. 30, from Perth, a missionary of the Baptist persuasion, entered the hospital on the 23d of June, on account of a diseased elbow-joint, of which the following account appears in the journal.

"His left elbow is very much enlarged, œdematous, and inflamed. There are two sinuses communicating with the joint; one situated immediately over the olecranon, and the other about three inches lower down. There is little pain, except on pressure, when it is very acute. He cannot allow of any motion of the joint, keeps his fingers extended, and seems to be afraid of moving the arm in the slightest degree.

"Seven years ago he fell upon his left elbow, and bruised it; two months afterwards it swelled and suppurated, and continued to discharge through several successive openings for two years. It then healed up, but remained swelled and stiff. Last January he was attacked with severe pain in the joint, which increased till five weeks ago, when matter formed, and was discharged by one of the former openings. A fortnight afterwards another abscess collected over the olecranon, and was opened by a surgeon in Perth.

"25th.—Mr. Syme proceeded to cut out the elbow-joint. Running his knife into the joint, with its back to the ulnar nerve, he made a transverse incision across the arm,

close to the olecranon, as far as the external condyle. From the middle of this incision another was made down the arm over the ulna, about three inches in length, and from the extremities of the one first mentioned there were made two up the arm, about two inches long. The flaps being dissected back, the articulating extremities of the ulna, humerus, and radius, were removed. The diseased synovial membrane was cut out, and the edges of the wound were then brought together by stitches. Two arteries spouted, but did not seem to require ligatures. The limb was placed in a bent posture, enveloped with caddis and a long bandage, to give it support. In this case Mr. Syme deviated from his usual practice, by making a longitudinal incision downwards from the centre of the transverse one, instead of two at its extremities, since he thus included the sinuses in the line of incision, and more readily exposed the ulna, which was the bone principally diseased.

"Cloths wet with cold water were applied after the operation, to check the disposition to bleed; but about two o'clock, as there was still a good deal of hemorrhage, Mr. Syme removed the dressings, and found it to proceed from an artery in the integuments of one of the lower flaps. The bleeding vessel being tied, the dressings were then replaced.

"26th.—The wound is looking very well, and seems as if it would heal by the first intention; pulse quick. Cold lotion to be continued. Tincture of antimony, with Epsom salts, to be taken every hour.

"28th.—There is a good deal of constitutional irritation. He complains of oppression over the stomach, and a little difficulty of breathing. The wound has not healed.

"29th.—A copious fetid discharge from the elbow, with some redness and tension.

"30th.—Feels much better; swelling subsiding. Acetate of lead lotion, with bandage, to be continued.

"July 1st.—Appetite much better. To sit up in bed.

"2d.—He was out of bed most of the day.

"3d.—The redness and swelling are quite gone. The edges of the wound to be brought together with adhesive plaister, and sulphate of zinc wash to be applied with bandage.

"5th.—The elbow is looking well, and the wound is granulating kindly. To have steak and a pint of porter.

"9th.—He had rigours yesterday. Elbow appears to be doing very well."

[A large abscess formed in the right hip; he became hectic, and lingered till the 31st, when he died.]

On dissection, the abscess of the hip was found to extend upwards among the muscles, as high as the lumbar region. There was an extensive abscess between the ilium and iliacus internus, descending into the groin. There were old adhesions between the pleura

pulmonalis and costalis on both sides, but especially on the right. Upon the centre of the anterior surface of the left lung, lymph had been recently effused to a considerable extent, and about eight ounces of sero-purulent turbid fluid lay in the pleura of the same side. The lungs in several parts were indurated or hepatized, and in some places suppuration had taken place, so as to form deposits of the size of a walnut. On the surface of the brain the vessels were more turgid than usual, and in some places there were small ecchymoses. Great part of the wound was healed, but the extremities of both the humerus and ulna were exfoliating.

This unfortunate man, whose thin emaciated care-worn appearance indicated an age not less than fifty, though it really was no more than thirty, was certainly, as the result showed, a most unfavourable subject for operation. At the same time, this is the only one of ten cases of excision of the elbow-joint which has terminated fatally; and I sincerely believe, that any operation, however slight, which had the effect of at all disturbing the constitution, would have given rise to equally disastrous consequences. This extreme tendency to disordered action could of course be learned only when it was too late.

DAVID FORRETT, æt. 28, from Cupar-Fife, recommended by Dr. Scott, of Cupar, on account of a diseased elbow-joint, of which he gave the following account:—"Nine months ago he began to be troubled with a gnawing pain at the back of his right elbow, as if between the ulna and humerus. There was then no swelling; the motion of the joint was somewhat impeded, but did not increase the pain. In January he observed a small tumor, about the size of a bean, a little above the internal condyle, which broke two weeks afterwards, and has continued to discharge ever since. Up to this time he had not been incapacitated from working, the pain which he felt being only moderate, and ascribed to rheumatism. But four months ago, without sustaining any injury, the joint inflamed, becoming red, swelled, and excessively painful, so as to render the slightest motion intolerable. He was bled and leeches repeatedly, by which means the activity of the disease was subdued, and shortly afterwards another opening made its appearance on the outside of the olecranon. The constant discharge, gnawing pain, stiffness of the joint, and general exhaustion consequent on this severe and protracted disease, have made him extremely anxious to obtain relief, and willing to submit to any measures necessary to afford it. He is thin, pale, and evidently much reduced by his sufferings."

This case evidently required either excision or amputation. My friend Mr. Webster, surgeon of the 4th Dragoon Guards, who saw the patient on his admission, and who had

not at that time witnessed the operation of excision, declared that he would have no hesitation in amputating the arm. Though there was evidently very extensive disease of all the soft parts, I did not consider this any objection to excision, and accordingly performed the operation in the usual manner—that is, by making a transverse incision from the ulnar nerve to the external tuberosity of the humerus, close to the olecranon, and then one upwards and downwards at both of its extremities. All the bones entering into the articulation were very much diseased, the cartilage being abraded and the surface carious. The synovial membrane, being very much thickened and gelatinous, was cut away as far as possible, one small artery of the integuments was tied, and the edges of the transverse incision were stitched together; but the extreme softness of the diseased integuments rendered it impossible to close the longitudinal ones in this way, as the threads instantly cut their way out. Caddis and a bandage were then applied.

The patient has done extremely well; the swelling of the joint is now almost gone; the discharge is almost entirely ceased; and he has the prospect of being soon dismissed cured.

ELIZABETH JOHNSTON, æt. 16, from Falkirk. In the first of these reports I mentioned the case of this girl, who entered the hospital last summer on account of a diseased elbow-joint, which exhibited the most formidable appearance of any that I have yet met with, but which, nevertheless, was completely cured by the operation of excision. She returned home, and remained perfectly well, using the arm for all ordinary purposes until December last, when, after exerting herself too much, her wrist swelled and became painful. Tartar emetic ointment was applied, and afterwards blisters; but an abscess soon formed, which opened, and has continued to discharge ever since. A probe introduced into the sinus, which is situated over the lower end of the radius, enters a large carious cavity of the bone, and can be pushed downwards into the wrist-joint.

As amputation appeared the only resource, it was performed on the 24th June, above the elbow, by the method of double flap.—She recovered most favourably, and is now well.

The elbow being dissected, afforded a specimen of the union which is established between the bones in such cases. When the integuments and muscles were dissected off, the appearance presented was wonderfully little different from that of a natural joint, owing to a great mass of fibrous ligamentous-looking substance, which connected the bones together. This connecting medium, which was above an inch in length, and perfectly flexible, did not constitute anything analogous to an ordinary articulation, and

more resembled the structure that usually exists in the false joints that result from fracture of the bones.—*Ibid.*

ST. GEORGE'S HOSPITAL.

Fistula Perineæ.

For our parts we know not a more troublesome and unmanageable complaint that what is denominated "fistula in perineo." If slight, it is excessively difficult to cure; if complicated and severe, it seems to set at defiance our present surgical knowledge, and frequently proves fatal in elderly persons. We have watched a considerable number of cases, and the results have appeared to us to be any thing but complimentary to the art of surgery. We have selected for the present report two fatal specimens of this complaint.

CASE I.—William Lord, ætatis 68, admitted June 2, 1830, under the care of Mr. Babington.

Has numerous fistulous openings in the perineum and scrotum, especially on the right side; another fistulous opening over the right abdominal ring; the various openings communicate more or less directly with each other, undermining the integument, which is blue, unhealthy, and excoriated. The urine escapes through all. No instrument whatever can be passed into the bladder.

By the patient's own account, no urine has passed through the meatus for nearly ten years, during which period he has had the various fistulæ in perineo. Has had stricture for twenty years.

On the 5th several sinuses were laid into one, in order to afford a more ready exit to the urine, and prevent its spreading towards the pubic openings. On the 11th he was seized with a violent rigor, speedily followed by another: the integuments of the perineum looked red, and the wounds were sloughy. Reaction to a slight extent succeeded, but there was no pain in the loins to demonstrate mischief in the kidneys, no evidence of erysipelas. Ether mixture and camphor were given internally; poultices, and the recumbent position, were the external agents.

On the 14th the subcutaneous cellular membrane of the perineum and posterior part of the scrotum were evidently infiltrated with urine; the former was inclined to slough. The patient had been sick in the morning, and was very low, but he had experienced no return of the rigors.

Catap. Fermenti. Haust. Cinch. c. Tinct. Op. $\mathfrak{m}\mathfrak{v}$. t. d.

On the 15th he appeared to be dying, and

displayed all the symptoms so characteristic of the prostration produced by urinous effusion. The countenance was sunken, sallow, hectic; the mind wandering; the pulse feeble, rapid, intermittent; the tongue dry, glazed, and red; the bowels disposed to diarrhœa. The cellular membrane of the perineum was sloughing, the infiltration extending to the dependent parts of the scrotum, and the skin in that direction assuming the peculiar erythematous tint.

Lotio Acid. Muriat. c. gtt. iij. ad Aquæ $\mathfrak{z}\mathfrak{j}$.
Vin. rubri $\mathfrak{z}\mathfrak{i}\mathfrak{v}$. Sp. Vin. Gall. $\mathfrak{z}\mathfrak{i}\mathfrak{v}$. quotidie.

Cataplasmata.

We believe that some incisions were made by Mr. Babington, but at all events the patient made a rally, and for two or three days did surprisingly well. The sloughing stopped, and the urine was freely discharged from the wound, for nearly the whole were now merged into one.

In the afternoon of the 17th he again had a rigor, and from this time to the 20th he went on with little alteration, being perhaps rather worse than better. He was very low, with feeble, intermitting pulse; dry, glazed tongue; and great despondency of mind. The state of the parts in the perineum varied little, being sloughy, with red, inflamed skin around.

In the evening of the 20th he died.

Setio Cadaveris.—Body emaciated.

Integuments of whole perineum removed by ulceration and sloughing. The latter had not passed below the subcutaneous cellular membrane, but sinuses ran more deeply in various directions. One passed round the penis on the left, and debouched into an ulcerated opening of some size on the right side of the pubes. The anterior portion of the urethra ended about the root of the penis in a perfect cul-de-sac. Beyond this extended for an inch and a half a solid, callous mass, in which corpora cavernosa and spongiosa were blended, and no canal could be discovered. About this spot were numerous sinuses.

The bladder was very capacious, not much thickened, and free from ulceration. The membranous part of the urethra was dilated, and about two inches from the caput gallinæ it ended in two large apertures, leading to the perineum, near the arch of the pubes. These openings, originally formed by ulceration, passed through the upper part of the urethra.

Kidneys small and puckered; left studded with small vesicles, and presenting one or two portions not unlike the medullary degeneration; right displaying still more of this appearance, and showing some approaches to the scrofulous tubercle.

Liver very soft, and of nutmeg colour.

Thorax:—Heart flabby, and rather large

CASE II.—Robert White, ætatis 59, a country labourer, admitted July 14, 1830, under the care of Mr. Babington.

Swelling the size of a duck's egg in the centre of the inferior part of the scrotum; no tumefaction of the perineum. Symptoms rather low and typhoid, but not to any extent. Appearance unhealthy.

By his own statement has had stricture for 18 years, and bougies have been often introduced. Present symptoms have been coming on for a fortnight or three weeks.

The tumor was punctured, and the contents of a sloughy, urinous abscess, discharged, but a good deal of induration remained at its sides. A small catheter, without a stilette, was introduced with little difficulty into the bladder, but it seemed to pass through a gristly false passage, and some pus escaped through it before the water issued. The quantity of the latter was then and afterwards remarkably small. The catheter was ordered to be kept in the bladder at night, and withdrawn during the day.

Cataplasma lini.

15th.—Symptoms rather more typhoid; no sickness nor rigor; sloughing of cellular membrane of scrotum.

Mist. Camph. c. Ammon. Carb. gr. v. Liq. Op. Sed $\mathfrak{m}\mathfrak{v}$. 6tis horis.

16th.—Feels lower; pulse feeble, not very frequent; tongue dry, and rather brown in the centre; night delirium. Wound much the same.

Arrow-root. Vin. rub. \mathfrak{Z} viii. Cerevis. fortis \mathfrak{Z} viii.

Wound injected with solution of chloride of soda, filled with carrot, and covered with a poultice.

Tespece.—Prostration increasing.

H. Cinch. c. Acid. Sulph. Dil $\mathfrak{m}\mathfrak{xv}$. 6tis horis.

Om. Mist. Camph.

17th.—Diarrhœa; wound cleaning.

21st.—Has continued with little alteration, having never fairly rallied from his feeble state. Has a tendency to low delirium, and is constantly crying; pulse feeble; bowels disposed to diarrhœa; urine at times contains pus. Is troubled with nausea; no rigor. The sloughing of the scrotum has entirely ceased, and the wound is becoming clean. The symptoms of sinking rapidly advanced, and on the 23d he died. The instrument could be passed from the penis out through the wound.

Sectio Cadaveris.—Body not much emaciated.

Abdomen.—Kidneys large, flabby, mottled in colour, with small yellowish spots dispersed through them. When cut open, they looked like Castile soap, but were paler.

Parts were minutely injected with blood vessels; parts shewed a deposite, apparently of partially organised lymph. The distinction between cortical and tubular structure was obscured. The whole was, no doubt, a specimen of chronic inflammation of the kidney. The inner membrane of the ureters and pelvis was inflamed—in one it was covered with lymph. The ureters were not dilated.

The bladder was small, contracted, thickened; its mucous membrane in a state of chronic inflammation, but not ulcerated. The urethra, from the caput-gallinaginis to the urethral end of the membranous portion, was extremely dilated. Beyond this the proper canal of the urethra was entirely obstructed; but a false passage extended from the further confine of the obstruction, by the side of the natural channel, and opened into the bladder beneath the caput-gallinaginis. The obstructed part of the urethra was solid, and of gristly hardness. The tunica vaginalis of the testes was mixed up in the indurated walls of the sloughy abscess in the scrotum. This, of course, communicated both with the urethra contained in the penis and the false passage leading to the bladder. It formed a sort of entropôt between them.

Thorax.—Nothing particular.

Cranium.—Not examined.

BOOKS RECEIVED FOR REVIEW.

A Series of Chemical and Medical Tables, forming a Synopsis of Chemistry, Materia Medica, Pharmacy, and Nosology. By John Hogg, Surgeon.

An Experimental Inquiry into the Structure and Function of the Spleen. By William Dobson.

Two Memoirs read before L'Academie Royale des Sciences, at Paris, on the successful Inhalation of diluted Chlorine, in the early stages of Pulmonary Consumption, as a Remedy capable of prolonging Life, and of alleviating the distressing Symptoms in the more advanced Stages of that Complaint. Translated from the French of M. Gannal, by William Horatio Potter, M.R.I.

Practical Observations on Leucorrhœa, Fluor Albus, or "Weakness." By George Jewel.

A Treatise on the minute Anatomy of the Bones. By Antonio Scarpa. Translated from the last Latin Edition.

Manual of Therapeutics. By L. Martinet, D.M.P. Translated, with Alterations and Additions, by Robert Norton, M.D.

An Inquiry as to the Expediency of a County Asylum for Pauper Lunatics. By William Palmer, D.D.

W. WILSON, Printer, 57, Skinner-Street, London.

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LECTURES

ON

COMPARATIVE ANATOMY,

AS ILLUSTRATIVE OF

GENERAL AND HUMAN PHYSIOLOGY,

*Delivered in the Medical School of
Birmingham,*

By S. LANGSTON PARKER.

Organic System of Nerves—Application of the preceding to the development of the human Brain—Functions of the Fifth Nerve—Its development increases as the Brain becomes more simple.

WE shall now return to the organic system of nerves, and endeavour to shew the assistance comparative research has given to the elucidation of their actions, and the phenomena over which they preside.

In the lowest animals, as the hydræ, and various other zoöphytes, the body is a homogeneous granular mass, consisting of a gelatinous substance, through which are disseminated numerous minute globules, which in all probability are composed of nervous matter. These globules, being equally distributed, endue every part with a uniform and similar degree of life, invariable and alike in all parts of their system, any of which being severed from the general mass, is capable of an existence separate from the parent, each becoming in itself a perfect animal. This arrangement of nervous globules will, if I mistake not, fully account for the extraordinary reproductive power and mode of generation in this class.

In the next grade, the "Echino dermata" of Cuvier, we find the nervous globules agglomerated or united to form cords or fibres, as in the "Holothuria" and "Sipunculus." In the latter animal, one fibre alone is appa-

rent; in the former, five unite, and form a ring encircling the œsophagus.

In the "Asterias," the union of the two nervous filaments, distributed to the rays or branches which constitute the body of the star, forms one single ganglion surrounding the œsophagus, which is situated in the centre of the body. In the *Ascaris lumbricoides* of man and the horse, two nervous filaments are met with, extending the whole length of the body. These filaments are united above the œsophagus by their superior extremities, and at the caudal extremity of the animal by their inferior. The nervous fibres, which resemble a succession of small granular points, are smaller at their termination than in the centre, where they form two small ganglia.

The *Lumbricus terrestris* possesses a large ganglion situated towards the head, from which two nervous trunks proceed, embracing the œsophagus, and uniting into one cord, which passes to the extremity of the trunk: from the ganglion and points of union of the nerves numerous branches arise. This system varies but little in the class *Vermes*, from the examples we have brought forward, excepting in the number of ganglia situated on the trajet of the main nervous trunk. In the *Hirudo medicinalis*, or common leech, these amount to twenty-three; in the *Aphrodita aculeata*, or sea-mouse, to twelve.

In insects the disposition is similar, their nervous apparatus being composed of ganglia from which the nerves arise, or to which they are attached, one large ganglion being placed towards the head, from which two nervous filaments descend, enveloping the œsophagus. The number of these bodies met with in the larva state of most insects, is eleven or twelve, whilst in the imago, or butterfly state, it is reduced to seven or eight. The acephalous mollusca, as the oyster, are provided with two ganglia only, situated at the opposite extremities of the animal; from these all the nerves arise. In the gasteropodous and cephalopodous orders,

as the *Lunax* and *Sepiæ*, the system assumes a more complicated structure, though formed after the same type as in the other invertebrata: the large ganglion placed towards the head, with a variable number of others, situated on the trajet of the principal trunk, form the chief feature of the disposition of the nervous system in the highest orders of this class. I would observe that I consider the visceral or sympathetic nerve, or its elements, to be the first part formed in the impregnated ova of all warm-blooded animals. I know that this opinion is opposed to that of many of the most distinguished anatomists of the present day, among whom I may mention Sir E. Heme, who expressly asserts that the brain and spinal cord are the first parts organized. Bichat's division of the functions of living beings into two orders, the organic and animal, has thrown much light on the physiology of the visceral nerve. The organic or vegetative functions over which it presides, are those of digestion, intestinal absorption, circulation, respiration, and secretion, and by examining the structures of those animals whose nervous system I have above generally described, we shall see that their organs are in most instances principally, and in some solely, appropriated to the fulfilment of one or more of these organic functions. In all the invertebrata, the organs of the vegetative sphere, or those for the nutrition and growth of the animal, are predominant, and prematurely developed in comparison with those of locomotion and the special senses; which latter functions, exclusively the property of the animal, are under the influence of the cerebral and spinal nerves.

The lowest zoöphytes and infusoria do not possess even a digestive cavity, nutrition being performed by an absorption of material from the surrounding media, and an excretion or throwing off from the surface of the body of the debris, or parts not assimilated. The *hydræ* and *medusæ* are provided with a mouth or single opening to a blind sac, which performs the office of a stomach, into which the aliment is received, and from which the excremental matter is rejected. This is also the case in the "*Furcularia rotatoria*," or wheel-animal, and the infinite variety of the inhabitants of corals and sponges. In these animals also the nervous system is equally simple with the digestive, the globules, as we have seen, being uniformly distributed through the whole structure of the body. The three orders of zoöphytes, although possessing an obscure locomotive power, have no organs for the performance of the function; no muscles, no articulated limbs, are to be met with; and the feeble movements they exhibit are owing to that species of irritability possessed uniformly by all parts of an animal body, though in different proportions by each, which, in contradistinction to

the power of motion under the influence of the will, has been denominated by Bichat the organic contractility. In the vermes and insecta, we find the intestinal tube open at both extremities, and the rudiments of a biliary apparatus in certain tubes floating loosely in the cavity of their bodies, and opening into the alimentary canal below the stomach. An attempt at circulation is here met with, the nutritive fluid exuding through the parietes of the visceral canal, and pervading all parts of the body where it is submitted to the action of the atmosphere contained in the tracheæ, or respiratory tubes. In these animals the medullary cord is ganglionic; the nervous influence is referrible to one or more centres, not equally diffused over the whole body, as in the *hydræ*. There being more than one special organ found in these orders, it has become necessary to establish a species of harmony in the performance of their functions, a concurrence of action in the various organs, tending to the increase and growth of the animal: this is accomplished by the union of the nervous filaments into one or more ganglia, which thus become a centre for the general reception of impressions and sensations, consequently establishing an uniformity of action in the functions over which they preside. It is worthy of remark, that as we ascend the animal series gradually from the zoöphyte to man, we find the nervous system acquiring a more marked centricity, as the number of other organs is increased and complicated. In the zoöphyte the nervous influence is uniformly distributed, one part being totally independent of the action of all others: here the vital principle, which we suppose to reside in the nerves, is diffused. In the next grade we find it referrible to many points, as a chain of ganglia, one part being severed from the rest, not being capable, as in the lowest orders, of a distinct and separate existence. In a still more exalted animal, the nervous influence is not equally distributed among many centres, but one ganglion assumes a slight predominance over the rest, as the cerebral ganglion of most of the invertebrata; the central power, as we rise higher in the scale, becoming more and more exclusively the property of this ganglion, which in vertebral animals acquires the name of brain. In the *repulæ* and *pisces*, instant death is not the consequence of destruction or ablation of the nervous centre, which in warm-blooded animals, and especially in man, acquires that perfection of function which is the distinctive character of his organization. In the remaining invertebrata, the crustacea, annelida, and mollusca, the organs of digestion, circulation, and respiration, assume a more complicated structure, and one or more of the special senses are added, which are constructed upon a very rudimentary and simple scale,

the nerves with which they are supplied being derived from the large cerebral ganglion.

From the preceding account of the development of the nervous system of ganglia, and the corresponding gradual increase in the number and complexity of the organs of the vegetative functions, I conclude that the nerves of the viscera, as those of the animal life, do not arise from the ganglia, but are formed in the parts where they are found, first under the appearance of globules, afterwards of filaments, which ultimately attach themselves to the ganglia, as common centres of impressions and actions. We shall apply these ideas to the origin and development of the human fœtus and the ova of warm-blooded animals. The human ovum, during the earliest periods of gestation, is a coagulum of semi-transparent gelatine or mucus, of a granulated and homogeneous structure, through which I conceive the nervous globules to be uniformly disseminated, precisely as they are in the lowest zoöphytes, enduing each part with that formative impulse which empowers it to build up its own organization. This opinion is strengthened by the fact, that on the surface of the impregnated molecule of the ova of gallinaceous ovipara, we may observe, a few hours after incubation, by the aid of a powerful microscope, a number of small round particles, which are of the same size as the ultimate globules composing the brain and nervous system generally: these globules are gradually agglomerated into nervous fibres and ganglia as the fœtus advances in age, and becomes more complex in its organization. Soëmmering has considered the nerves arising from the ganglionic system to be peculiarly the nerves of the heart and arteries, endowing them with that irritability which presides over all their phenomena, in health and in disease. This observation likewise derives support and illustration from what we perceive in the progress of the development of the chick—a true sanguineous circulation, commencing as early as the twenty-fourth hour of incubation: the heart and large arterial trunks are in action towards the end of the second day, after which period the increase of the arterial and venous systems, lining the chorion, exceed all calculation. That this system of nerves is first formed, first in action, presiding particularly over the functions of the vascular system, must be evident from the mode of life carried on in the fœtus during gestation. "As soon as the least organization is apparent, the little heart may be seen producing its blood on all sides: the heart is the part first formed, and as all the organic phenomena depend upon it, we may readily conceive in what way the functions of inward life are thrown into exercise.

"We have said that the organic life was composed of the organs of digestion, circula-

tion, absorption, respiration, and secretion, the union of these forming two great orders of functions; viz. those of assimilation and decomposition, an habitual circle of creation and decomposition. In the factus this circle is singularly contracted. In the first place the functions of assimilation are much fewer than in the adult; the molecules before they arrive within the organs they are destined to create, are not submitted to so many actions; they penetrate the fœtus, already elaborated by the digestion, circulation, and respiration of the mother. Instead of traversing the apparatus of the digestive organs, which at this age appear to be almost inactive, they enter at once into the system of the circulation: it is not requisite that they should be submitted to the influence of respiratory process, the nutritive molecules passing almost directly from the circulating torrent into the assimilative system, which is consequently much less complicated than that of the following age*."

It is probable that the nerves of this system accompany all the arteries to their final distribution. Dr. Parry has seen a total loss of pulse in one arm, with coldness, but complete power of motion in the part; whilst the other was warm, possessed a perfectly good pulse, but had lost all power of voluntary motion. This fact seems to prove that there must be a distinct nerve supplying the organs of circulation. The great sympathetic, which we have supposed to be more peculiarly the nerve of the arteries, bears a strict relation, in its development, to the activity and force of circulation in the four classes of vertebrata, in whom alone a red-blooded circulation exists. In the reptilia and pisces, the greater part of the ganglia found upon the course of the nerve have disappeared, and the blood and the vessels containing it are destitute of that irritability, and those vital properties, which are so remarkable in the birds and mammalia. The animal heat, likewise, decreases with the number of ganglia, and the two are met with in a direct ratio, the blood always corresponding in rapidity of motion and temperature to the number of ganglia found in the course of the sympathetic nerve. Thus the ganglia have a direct and marked influence upon the organs of circulation and their contents.

The functions of the organic life are the first in action in the fœtus, and the last at rest in the old man. The heart and arteries could not be supplied from the same sources as the voluntary muscles, or they must, like them, be subject to fatigue. All the organs supplied from the brain and spinal nerves require a periodical cessation from action, during which time the nervous influence expended in the active period is renewed.

* Bichat on Life and Death, by F. Gold, p. 131.

This is never the case with the organs supplied by the ganglionic system: from the first commencement of organization to the moment of final dissolution, these functions are uniformly and constantly in action, and never in the slightest degree susceptible of weariness or fatigue. We conclude, then, that the nerves of the ganglionic system are the only ones possessed by all invertebrate animals;—that they are the elements of the organization of the ova of warm-blooded animals, being developed before the rudiments of the vascular system, or simultaneously with it, and that the mutual reaction of these systems is the foundation and building up of the organization to the future being.

From what we have seen of the origin of this nerve in animals and the *fœtus*, its complexity increasing with the number of organs, we conclude that it is a system in itself, a peculiar sensitive centre which transmits impressions to the animal sensorium, and consequently determines actions in the voluntary muscles. In the *fœtus* it is alone active: it presides over the circulatory and nutritive organs, excites the energy of the heart, extending its action even to the animal centre. In the anencephalic and acephalic *fœtuses*, it excites muscular movements, by its action upon the spinal nerves; there being no special senses to receive, and consequently to determine in the various organs, those impressions and actions which are the result of cerebral influence.

After birth this nerve acts upon the animal centre, and establishes between the brain and viscera a connexion prolific in phenomena. At all times it regulates the action of the capillary system, and directs nutrition by its influence upon the "formative impulse," (*visus formativus* of Blumenbach).

We have hitherto adverted to the connexion of the ganglionic system of nerves with the vegetative sphere of the invertebrate, and noticed the influence they exercise upon the functions these organs have to perform. We have also hinted, that though the special senses are rudimentary in the invertebrate classes, still they are to be met with, moderately developed, in many of the orders composing this great family.

The eyes of the insecta are perfectly formed, though the sense of vision is indistinct and obscure. This organ, in the crustacea and mollusca cephalopoda, is much more perfect, and approaches nearly to the organization of reptiles and fishes.

An apparatus for the distinction of sounds is met with in the crustacea, under the form of a scaly cylinder open at both extremities, by one of which the nerve performing the auditory function is admitted, whilst the other is closed by an elastic membrane, similar to the *membrana tympani*, and destined to the same office.

The ear is equally simple in the sepia, but entirely concealed in the annular cartilage which serves for the base and insertion of the tentacula, or feet.

The sense of smell is evidently possessed by most of the invertebrate tribes, particularly the scarabæi, bees, and the *musca carnæna*. It is more obscure in the mollusca and crustacea, appearing to reside, in all the classes, in the trachea or entrance to the respiratory organs. Thus we have the special senses, in a more or less perfect state, in the invertebrata; and it remains to be considered by what nerves they are enabled to perform their functions, since it is wholly inconsistent to suppose that the nerves connected to the ganglia can fulfil these offices, as we have sufficiently proved them to be appropriated exclusively to others. We shall have to notice, when we speak of the development of the brain, that in the ova of all vertebrate animals this viscus is primitively fluid, and necessarily provided with a membranous envelope, to prevent its extravasation; which envelope, at a future period of its organization, is designed to fulfil many and important functions. This is never the case with the cerebral ganglia of the invertebrata, which is the only part of the nervous system in any way to be compared to the brain of vertebrate animals. This ganglion is never met with in a fluid state—is never enveloped in a distinct membrane—but in the larva of insects, and the lowest orders, is at first discovered as a double organ, situated laterally with regard to the median line, and subsequently united upon it. It has no distinct or separate elements, or parts, as the brain of all the vertebrata, but is a single and simple nervous mass, sometimes divided by a central raphe.

These anatomical facts, with a variety of others, which it would be superfluous to adduce here, incline me to reject any analogy as existing between the cerebral ganglion of the invertebrata and brain of the higher classes. But if this organ is not a brain, to what other part of the nervous system can it be compared, as all the nerves supplying the special senses arise from or are connected with it?

The cerebral ganglion of the invertebrata is analogous in its actions to the *casserian* or cephalic ganglion of all vertebrate animals. We hasten to lay before you our proofs. All the animals comprising the four great classes of vertebrata, are provided with a special and an accessory nerve for each special sense, except in one or two instances, where one sense happens to be null or rudimentary; for instance, for vision we have the optic nerve, the olfactory or first pair for smell, and the auditory or seventh pair for the apprehension of sound; but to each of these nerves is appended or added one or two branches of the fifth pair, con-

nected with the casserian ganglion as an accessory organ, intended to render the function more perfect and effective. In one or two animals the special nerve is wanting, the sense remains rudimentary and imperfect, and is supplied only by the fifth or accessory nerve. It is thus with the olfactory sense of the phoca and other cetaceous animals; the sense of smell is present, but supplied only by one or two branches of the fifth pair.

In the "*Sorex*," or water-shrew, the "*Talpa vesicolor*," or rat-mole of the Cape, the "*Zemmi*," the Proteus of the subterranean lakes of Carniola, and some others, the eye is rudimentary, the sense of vision present, though obscure, the optic nerve has disappeared from the base of the brain, and the sense is furnished with one branch of the fifth pair only.

In fish, more particularly the family of the rays, the acoustic nerve is wanting, and the organ provided solely with a branch of the fifth.

We thus find that as the senses become more simple they are abstracted from the influence of a special, and submitted to the imperfect action of an accessory nerve. Even in the lower vertebrate, as we have seen, this takes place; and when we come to examine the invertebrate classes, we find them supplied with one nerve only for each sense; and reasoning from analogy, and from the rudimentary state of the organ performing the function, we are led to suppose that it is the accessory nerve alone, which is possessed by all the invertebrata.

In the anencephalic fetuses, where the brain is entirely wanting and the bones of the head are imperfectly developed, the body of the sphenoid being also wanting, the two casserian ganglia approach each other and are confounded in one general mass, with which the olfactory, optic, acoustic, and other nerves of the head, are joined and connected.

Many such instances of monstrosity are upon record, having occurred both in man and animals, and during the life of the individual the functions of vision, of taste (since infants thus deformed have taken the breast), and of hearing, have been perfect; the ganglion of the fifth pair having presided over the functions which, in a normal state, are attributed only to the special nerves.

It is well known that, after the section of the fifth pair of nerves in animals, the senses of hearing, sight, smell, and taste, have been destroyed on the side on which the nerve has been divided. The cornea became inflamed, opaque, and ulcerated, in the animals submitted to this experiment by Magendie; the tongue was insensible, and assumed a whitish appearance; the gums fell from the teeth, the pituitary membrane was not affected by the impression of odours,

and the sense of hearing was destroyed. Serres has recorded a case in which the loss of these senses on one side was the consequence of a morbid affection of the casserian ganglion on the same side. The brain, then, of the vertebrate animals is replaced by the casserian ganglion which presides over the functions submitted to the former organ in all the vertebrata. This nerve also becomes the connecting link between the organizations of the vertebrate and invertebrate classes.

In the higher animals of the first division, we have seen this nerve fulfilling merely the office of an accessory organ to those supplying the special senses; and as, in the lower orders, one sense or another becomes rudimentary, it is supplied by one or two branches of the fifth pair only, whilst, in the invertebrata, this is the sole nerve with which the organs of their senses are provided. As the fifth pair is the bond of connexion between these two great families, in their physical properties, so it is the uniting medium of their moral, intellectual, or instinctive feelings, propensities, and acts. And as the brain in the vertebral classes directs the operations of the mind, and the mind those of the body, so the fifth pair in the invertebral presides over the wonderful and variable manifestation of instinct, and, in the intermediate grades, becomes the connecting link between the two as the brain is reduced and the fifth pair elevated in their organization and proportions to the general nervous mass.

If we examine the central mass of the whole animal kingdom, we shall find the brain becoming more and more imperfect, as we descend from man to the quadrumana, from the latter to the chiroptera, digitata, cetacea, reptiles, and fishes, in the latter of which it is reduced to the simple elements composing the rudiments of this organ in the mammalia, reptiles, and birds.

As the brain becomes more simple, and the intellectual faculties, of which it is the seat, fewer and more imperceptible, the fifth pair and the instinctive faculties are more and more perfectly developed. In man these properties are purely rudimentary. He is governed by reason, but not enslaved by instinct. In him also the fifth pair, in comparison with the other parts of the nervous system, is reduced to its minimum of existence. The simiæ, the dog, the elephant, and most of the higher mammalia, though immeasurably below the human subject, appear to be directed by the impulse of brutish reason. In these animals also the fifth pair bears but an inconsiderable proportion to the general nervous mass; the instinctive faculties are indeed manifest, but not carried to the extent they are met with in many of the lower orders. In the seals and beavers, among the mammalia, the

faculties are at their highest pitch of development, and seem rather to be the effect of an unerring reasoning power than the result of the organization of instinct. It is in these animals that the brain is reduced to a state of atrophy, whilst the fifth pair is carried to an enormous extent of development. This property, though brought to its highest perfection among the mammalia in the beaver, is nevertheless far inferior to the instinct of the insecta, as developed in the mechanical structures of the wasp, the bee, and the spider. Here the brain is altogether wanting, the cæserian ganglion being the predominating part of the nervous system in all the invertebrata; and in the bee this organ is carried to its highest point of complexity and organization. This insect is placed, by the superiority of its instinctive faculties, at the head of the invertebrata, because its cranial ganglia are the largest and most perfectly developed. Man holds the highest grade among the vertebrata, from the predominance of his brain over the other parts of his nervous system; in him instinct is null, and the fifth pair rudimentary. These two organs, the brain and fifth pair of nerves, are always developed in an inverse ratio. The former goes progressively decreasing from man to the pisces, whilst, in the invertebrata, it becomes the central and only system, and the predominating nervous influence.

Through the whole animal series, we find the intellectual faculties becoming gradually more and more extinct as the brain loses its perfection of centricity, and is less and less perfectly organized.

The instinctive faculties, on the contrary, are slowly carried to their highest point, as the fifth pair acquires an increase of size and development. These faculties and the fifth pair always bear toward each other the same relation; the effect is always proportionate to the cause—if the nerve is small, the faculty is rudimentary; if the former be more perfectly organized, the latter is met with in a greater degree of perfection.

From the foregoing anatomical facts we make the following deductions, in reference to general and human physiology. We conclude—

1st. That we are enabled clearly to point out the offices and functions of this nerve, which would still be involved in obscurity without the assistance of comparative anatomy. We are led certainly to conclude that it exercises a marked influence over the organs of the senses in man, and all vertebrate animals. That many animals are deprived of these special nerves, as the optic, the olfactory, or acoustic, and the senses of vision, smell, and hearing, are not lost, as the sense is supplied by branches of the fifth pair.

2dly. That, in the vertebrate classes, the instinctive faculties are in strict accordance

with the volume and development of this nerve.

3dly. That as the ganglia of the organic system, by mutual connexion, establish and preserve a concurrence of impression and action in the performance of the vegetative functions, so the fifth pair concurs in promoting harmony and unity of action in the organs of the special senses.

4thly. That this nerve is the link preserving the strict concordance of the nervous system, from the lowest articulate animals, through the various classes of the vertebrata, to man.

From what we have seen, in our exposition of the nervous system of invertebrate animals, it is evident—

1st. That the nerves of the ganglionic system exist independently of those of the spinal cord and brain, and are formed in the organs to which they are distributed, first under the form of globules, and subsequently of nervous cords. That the origin of these nerves is not in the ganglia, but in the organs where they are found; they arise or take root in the organ, and are ultimately connected to the ganglia as a common centre.

2dly. We conclude that these nerves pre-serve over the organic functions, or those of digestion, circulation, and secretion, and the chemical function of respiration; since no apparatus for the performance of the mechanical operations of this process is met with in any invertebrate animal.

3dly. That in the higher classes of the invertebrata, the cerebral or cranial ganglion bears more analogy to the cæserian ganglion of the fifth pair than to the brain of the vertebrata, as we have sufficiently proved. The system of the fifth pair and this ganglion is likewise the seat of instinct.

We likewise conclude, with "Cuvier," that as the nerves are primitively formed in organs without any connexion to a central nervous mass, their difference of functions depends rather upon the different organization of the parts in which they are found than in any peculiar property inherent in the nerve itself.

CLINICAL OBSERVATIONS ON WOUNDS PRODUCED BY FIRE-ARMS.

By M. DUPUYTREN.

[Continued from page 54.]

Dilatation (débridemens) of Gun-shot Wounds.

NEXT to hæmorrhage, the most serious accident to be apprehended is contraction. It has been already said

that wounds inflicted by cannon-shot, compared with wounds from cutting and thrusting weapons, are long, narrow, passing directly across a limb, and almost always complicated with the presence of foreign bodies. The line of passage inflames consecutively and suppurates; by this process alone can foreign bodies and pus be discharged. The nature of these complications points out their proper remedy. The object is to allow those foreign bodies, the pus, and the gangrenous parts, to escape; hence the necessity of making certain incisions, commonly, though improperly called, dilatations (*débridemens*); for where no contraction has yet taken place, there can possibly be no dilatation.

Let us suppose a wound to traverse muscle only, without engaging vessels or nerves of any consequence, and without breaking any bone—should such a wound be left to itself, or treated in any particular way? In some instances there is no danger in leaving it to itself, the cure is perfect; but this is rather of rare occurrence, and should not justify the neglect of proper modes of obviating the contraction which is so apt to arise. Nobody can tell *à priori* in what case this last circumstance will not take place.

Dilatation consists in making, at the apertures of entrance and exit, certain incisions, which, by enlarging the wound as it passes through the skin or tendinous expansions more particularly, allow the inflammation to extend itself unimpeded. But the aperture of egress is of the two that which chiefly demands dilatation, and for this reason: the foreign bodies, which are either formed in, or introduced into the wound, are generally lying near the exit aperture, which is, indeed, the larger of the two, and consequently requires the larger incision. Another general rule, which it would be well to follow, is to dilate always more amply that aperture which, with respect to the position of the patient, lies lowest and is most likely to give egress to the foreign bodies and the purulent matter.

The inflammation which occurs in parts slightly wounded, very frequently, as in whitlow, cannot develop itself freely. When the wound penetrates to the inside of whole aponeuroses, two kinds of phenomena may be observed: 1. The contained parts which are in-

flamed increase in bulk, and are straitened in a limited determined space. The aponeuroses yield perhaps a little at first, but they soon cease to do so. If the compression be very considerable, gangrene of the compressed parts is the inevitable consequence. 2. Gangrene of the aponeuroses also occurs from excess of distention. Thus the death of both tissues takes place. However, to avoid accidents, room should be made for the process of inflammation to go forward, and the tendinous expansions should be secured from distention.

The operation is performed by means of a grooved sound, or, better still, with the finger for a director, and with the use of a blunt-pointed bistoury. Further, to guard against accidents, the enlargement should be made parallel to the axis of the vessels, nerves, tendons, or muscular fibres; though this last is not always necessary, for it will happen sometimes that the aperture of exit is obstructed by a muscle, and the purulent discharge consequently prevented. Of course the muscle must, in this case, be cut across.

As to the extent of the dilatation in depth and length, it should clearly be made as deep as possible where the aponeurotic expansions are deeply seated, and *vice versa*. The length should generally be about two inches, or from that to two and a half, or three; half of it one way and half the other. It need scarcely be added, that an insufficient dilatation will not relieve the narrow confinement of the wound, nor allow a sufficiently free exit to the foreign bodies, or the pus. In this process, too, as in most others, certain obvious limitations must be observed. Dilatation is by no means necessary in every case; for instance, in certain wounds of the thick part of the thigh. And it should further be observed, that dilatation is useless in some cases—as in wounds of the cheek and the ear; and, in fine, the operation should always be performed with much precaution, and much exactness and precision, on the walls of cavities, and such like delicate situations.

After the dilatation, hæmorrhage is as frequent as it is rare on the receipt of the injury, which depends on the difference of the wounds, the one being simple and the other complicated with an eschar. At this time the patient requires to be carefully watched.

The separation having taken place, we ought immediately to set about extracting any foreign bodies, and these may be either the projectile itself, portions of the dress, buttons, pieces of money, &c. The ball often passes through even when the bone has opposed it and been broken; at other times it remains lodged in the part. How are we to distinguish the two cases? If there be two openings we may be certain that some part at all events is passed out, but even in this case part may remain, having been divided by the bone. If there be but one opening it is to be feared that the ball has lodged, but it is not quite certain. Sometimes, in fact, if its course has been oblique, or if it have lost its force so as not to penetrate deeply, it may fall out again. If the wound does not go beyond the integuments we may infer that the projectile is not in it; but if it have reached the centre of the limb, and particularly if it have broken the bone, we may be almost certain that it remains within. In such case it is only by repeatedly probing with extreme care that we sometimes discover it, and are enabled to remove it. Is it proper to extract the projectile immediately, when this is practicable? Certainly: if the ball can be felt the wound ought to be dilated, to facilitate the examination and render the extraction less painful. The best instrument with which to detect it is the finger; but if this cannot reach it, we are to employ a female sound—avoiding any kind of instrument which might wound the parts. If the foreign body can be felt with the finger, the pincers are generally sufficient for its extraction. The bullet forceps is better if it be either deep-seated or of irregular figure. If the course be sinuous, it is impossible to remove it by the way it entered, but recourse must be had to counter-opening, of which more by-and-by. Any portion of the clothes, or other foreign body which can be seen, ought to be removed at the same time, and the wound thoroughly cleansed. It is the size of the foreign body, and its shape, which influences the healing of the wound; the mere metallic substances of which they are composed, are not in themselves deleterious. Sometimes, however, a bullet, but still more pellets of lead, produce no inconvenience, and remain so for a considerable num-

ber of years; but more frequently they cause inflammation, ending in abscess, and thus leading to their evacuation. In other instances it is only after many years that, in consequence of a blow, or some other violence, the cyst surrounding the ball inflames and suppurates. If, however, the foreign body be irregular, and especially if it have sharp angles, inflammation and suppuration are readily induced, and the cure can scarcely be effected without its extraction.

The bullet being removed, portions of bone may remain which still prevent the healing process; or this may be effected by pieces of the dress, &c. and the removal of all these is, therefore, very important.

Pellets of lead are much more harmless, and there are many examples in which they have remained in the bodies of men and animals for many years without causing inconvenience. M. Dupuytren found a bullet, which had remained inert, behind the tibia; and it is known that Harvey, in making some investigations regarding the circulation, found a ball in the heart of a deer. Let us consider what happens when a foreign body of this kind—a grain of shot, for instance, remains long in any part. We constantly observe a contrivance by which it is isolated from the surrounding parts. If it does not induce inflammation and suppuration—if the parts become habituated to its presence—it is no longer found in immediate contact with the muscular fibres, tendons, &c. but a membrane is formed, which, on its exterior, adheres to the surrounding parts:—this membrane, which is at first villous, secretes pus, which is absorbed: it then becomes serous, and only yields a little watery fluid. The foreign body is virtually incysted, itself being free, and without adhesion. It may thus remain during a life-time without change, or may at any time be thrown off in consequence of inflammation accidentally excited. If the foreign body be of copper or sharp, it is thought that it cannot remain in this quiescent state, but that its form or quality will cause inflammation.

We have said that it was difficult to extract a ball with the common dressing forceps: it is often laid hold of by one side; it slips, and this, with the irregularities it often presents, wounds the parts, and these evils are avoided by

using the bullet forceps, which penetrate more deeply, are better adapted to the shape of the foreign body, and cover its asperities.

Wounds made by Bullets which traverse the Bones and Soft Parts.

The fracture of bones, we have said, adds much to the severity of wounds; but the *modus agendi* of projectiles on the body is different according to the greater or less force, the greater or less velocity which they have, and according to the part they strike: thus a ball which strikes with great force the spongy texture of a bone, the extremity of the tibia or femur, for instance, passes through, making a cylindrical aperture, without splinters, just as if it were in plaster of Paris, or in the soft parts.

What, then, are the indications which such wounds present to us? If the ball has lodged in the spongy texture, the circumstance is recognised by the absence of any opening for its exit—by the opening which there is, leading at once directly to the bone, which is easily recognised by its sound and resistance against the probe. The shock produced by steel against a leaden bullet is dull; against a compact bone the sound is clear; against a spongy bone there is no resonance, and the resistance is of a peculiar nature, which readily distinguishes it from the two others. The ball once found, if it be enveloped in a portion of the dress it is easily removed, but such cases are rare: if it cannot be removed in this way, the *tire fond* becomes of great use, for the ball being fixed, the instrument pierces it with ease, and it is afterwards readily withdrawn, turning round and round so as to aid its passage. But suppose this cannot be accomplished, what is then to be done? The integument must be divided by a crucial incision, the flaps dissected back, and the crown of the trephine applied upon the bone, after which it is easily withdrawn. The same plan is to be adopted if the ball be lodged in a flat bone, as the cranium, for instance.

The injury is quite different when a compact bone is fractured by a ball having great velocity. The part is actually splintered, and the greater number of those who died at the Hôtel Dieu laboured under wounds of this kind.

The first thing to be done is to force the opening both of entrance and exit. If there be no opening of exit, the ball must be lodged in the part; and it must, if possible, be removed with the loose fragments of bone. With regard to the mode of effecting the removal of foreign bodies, there is nothing very particular to remark farther than this—that long continued and painful attempts are apt to bring on tetanus, while leaving the foreign bodies *in situ* give rise to troublesome suppurations. At La Charité, where they insisted more on extracting every thing, they had more tetanus. At the Hôtel Dieu, where, rather than persevere very long, they suffered the ball, &c. to remain, the patients were subsequently affected with copious and dangerous suppurations.

As to splinters there are two kinds, primitive and secondary. The former are mobile, and may be extracted with the pincers or bullet forceps. The second are adherent to the adjacent parts, but detached from the mass of bone. Now these ought to be laid hold of, and the pedicle by which they remain fixed, if possible, divided. But if they be too deep-seated for this, ought they to be torn out? I have done this, said the Professor, but have found the disadvantages exceed the benefits;—frequently there has been a copious flow of blood—still more frequently great pain and spasms of the part. Besides these, there may be a third kind of splinter; such as have their vitality destroyed by the blow, but which are not separated from the rest of the bone; at first fixed, they afterwards become detached, but ought not to be removed till this takes place, that is, in about forty or fifty days, when they become necrosed.

DR. PHILIP'S REPLY TO A REVIEW
OF HIS

Treatise on the Means of Preserving Health, and particularly the Prevention of Organic Diseases—in the last number of the *Medico-Chirurgical Review*.

I MAKE no apology for the length of the following observations, because as I am called upon to point out the mode of reviewing books, at least occasionally

adopted in a medical journal of considerable circulation, I am performing a task in which the medical public is concerned. Dr. Johnson will not think it unreasonable in me to claim the same liberty of criticism respecting his analysis which he takes respecting my treatise. I shall not, however, use it with the same freedom; yet in such a manner as I hope may in future be of service to him.

Dr. Johnson, it seems, does not always think it necessary to read the book he reviews. This I should have inferred from his account of my Treatise, for I cannot believe he would intentionally misrepresent its contents, had he not himself informed me of it in various passages, some of which will occur as I proceed; for instance, by observing that I "never once allude to auscultation."

The treatise, he alleges, is composed of "fragments" from my other works. Now the objects of this treatise are to point out the means of detecting and correcting the first beginnings of diseases, and how far the physiological facts I had ascertained must influence our views of their nature and treatment; and these objects are never lost sight of in any part of it. It is impossible, therefore, that it can be made up of fragments of my former treatises, as I have never before written on these subjects.

I conceive the chief business of the critic, in reviewing such a treatise, consists in the consideration of the following questions. How far has the author succeeded in laying down rules for detecting and correcting the first beginnings of disease? Are his physiological statements sufficiently established? Have they the alleged influence on our views of the nature and treatment of diseases? But these questions do not even seem to have occurred to Dr. Johnson; and had it not been for the quotations and the name, I should not have known that it was my own treatise he was reviewing. Is this consistent either with the implied compact between the reviewer and the public, or with what is due to the authors whose works are submitted to his opinion? That authors must necessarily submit their works to any one who chooses to place himself in the reviewer's chair, is an additional claim on his attention and his candour. No man can stand in a more humiliating predicament than

the critic who censures severely, and at the same time betrays the want either of ability or will to understand the subject of his censure.

Dr. Johnson's first remarks relate to my alleged unprofessional conduct in what he considers an attempt to make the public their own physician. If so absurd a construction could be put on the expressions in the preface to my treatise, it would be contradicted in every page of it, where an intimate knowledge of the animal economy, and the experience of those who have devoted themselves to the treatment of diseases, are pointed out as the only rational basis of practice.

My expressions, in their fair and very evident meaning, it is not difficult to understand. My only view, as far as relates to the unprofessional reader, is to make him aware of the first beginnings of disease, the circumstances which render them important, and the principles on which their progress may be checked; not to persuade him that he has either the knowledge or experience requisite for the application of those principles. The patient must be aware of his danger, and see the probability of averting it, before the physician can have an opportunity of exercising his skill.

In diseases of long continuance, I have ever found it the physician's best aid that his patient, if he be a man of tolerable understanding, should be acquainted with the general nature of the disease, and the principles on which the hopes of relief are built. These are not the days of passive obedience, even with respect to our profession; and when the cure is tedious, and the patient's mind entire, he *will* reason about what we are doing, and it is no small advantage, as far as we can, to carry him along with us. The times when science could be made a mystery are passed away. A well-informed modern physician differs as much from the monkish physician of former days as from the itinerant mountebank. We are not jealous of others prying into the mysteries of our science: medical knowledge is now of such extent, that there is no fear of others taking the trouble to carry away such a portion as will sensibly interfere with the pre-eminence of those who devote their lives to its study and its application. It does not now consist in a string of nostrums, but in the knowledge of the laws of the animal

economy, and the principles on which our various means of cure operate—a knowledge it is impossible to obtain except by patient study and careful observation. These are open, and we wish them to be open to all, and if some arrogate to themselves a knowledge they do not possess, they are few among the many who are regulated by the dictates of common sense, and their number will never be lessened by an assumption of mystery on our part. Dr. Johnson's pathetic lamentation might have moved his brethren of the profession three hundred years ago, but for myself—he will shudder at the daring declaration—I should experience neither “trembling,” nor “palpitation*,” were I explaining to the most illiterate the most recondite terms of our science.

With respect to Dr. Johnson's *critique* on the Treatise itself, it would, indeed, be loss of time to follow him in all his steps. I shall therefore only state a few instances of the kind of criticism which runs through the whole. It will be found perfectly consistent with the plan of giving an account of, and passing judgment on a book, that one has only opened here and there. To quote a bare detail of phenomena, as Dr. Johnson does, in pages 316 and 317, without explaining why the detail is given, and accuse it of want of interest, when the reviewer has overlooked or concealed the only thing which can give it interest, will hardly be regarded as fair criticism: nor have his observations on my use of the word *simple*, and what appears to his hasty view a direct contradiction, any better claim. There are many words in all languages which admit of being used in different senses, the particular sense in which they are used being determined by the context. I believe there are few men who would not readily distinguish the two senses in which I use the word in question.

“Dr. P.” he observes, in another passage, “does not believe that those predisposed to consumption are born with the seeds of tubercles in their lungs. It would be vain to tell him that the actual tubercles have been detected in the lungs of the foetus in utero, and of the infant newly born.” Page 319. How our being occasionally subject to tubercles before as well as after birth can af-

fect the question, it is not easy to see! That I may not be supposed to have selected a very singular instance of Dr. Johnson's mode of reasoning, I shall give another, and the reader, if he pleases, may easily select many. “Is it not surprising,” he observes, “that disordered function of the lungs should be evident when disease exists there; while in the heart, which, according to our author, is far more simple in structure and function, the organic diseases betray themselves by no symptoms till they have made such progress that we have no means of arresting them? This is surely one of the most palpable contradictions that can be imagined.”—Page 319. In what does the contradiction consist? The organs are different both in their structure and function. Besides, if Dr. Johnson had read my treatise, he would have found that I consider it just as difficult to detect the first beginnings of organic disease in the lungs as in the heart.

These passages are preceded and followed by several pages of reasonings of the same description, respecting diseases of the heart, lungs, stomach, and liver, in which Dr. Johnson forgets, if he ever knew, that the earliest stages of disease alone are comprehended in the plan of my Treatise, the more advanced stages and the various sympathetic affections which often accompany them being only referred to—when they appear to illustrate those stages. To unravel the mysteries of these pages, where original and sympathetic affections are jumbled together without either order or distinction, would be an attempt as difficult as unprofitable; I must, therefore, leave the Doctor to enjoy the self-complacency with which he indites his “astounding proofs” of Dr. Philip's ignorance, till a little more accurate reflection shall enable him better to arrange the vast stock of knowledge of which he boasts. I fear Dr. Johnson sometimes reads as he writes, too fast for profit either to himself or his readers.

With respect to his learned observations relating to hypertrophy of the heart, and the inaccuracy of my statements, perhaps a calm review and comparison of the facts, if he can find time for it, may teach him that whatever the nature of the previous symptoms may be, and however liable the patient to secondary diseases in

* His review of my Treatise, p. 322.

long-continued disease of the heart, if his death be directly occasioned by the disease of this organ, it is *always* the effect of the impeded transmission of the blood through it, in consequence of its debilitated action, or of more direct causes of obstruction existing in it.

The taste displayed in Dr. Johnson's criticisms is not inferior to their perspicuity: it is but doing him justice to give a specimen. He quotes from my treatise the following sentences, the greater part, I know not why, in italics:—"In such a treatise as the present, whose objects are to detect the first beginnings of organic disease, and point out the means of obviating them, it would be of little advantage to dwell on the simple organic diseases of the heart, because they betray themselves by no symptoms till they have made such progress that we have no means of arresting them; and the same observation applies to the organic diseases of the aorta, and the other large vessels attached to the heart. But although we have no warning of the approach of simple organic disease of the heart, and therefore can lay down no rules for its prevention, as organic disease is sometimes the effect of other diseases of this organ, which may both be detected and relieved, these diseases are the proper subjects of such a treatise." On this passage, which to men of ordinary understanding I should conceive would be sufficiently intelligible, Dr. Johnson elegantly observes, "In the whole course of our lives we never read such a jumble of absurdity, contradiction, and *bad physic*, as the foregoing extract contains."—Page 318.

So little is he acquainted with the nature of the work he is reviewing, that he says of the enumeration of the physiological facts on which it is founded, that having been before published, it is only inserted for the purpose of swelling the volume. Had these facts not been previously published, and thus publicly canvassed, their accuracy could not have been ascertained, and therefore they could not have been a proper foundation for such a work; and it is quite plain, that their having been formerly published could not answer the purpose for which they are here introduced,—observations too self-evident to have escaped the reviewer if he had taken the trouble to read the treatise.

In page 318 he says that my obser-

vations on inflammation of the heart are chiefly taken from my Treatise on Febrile Diseases. Now if he will take the trouble to consult this treatise, he will find that *the observations in question are not in it, and therefore cannot be taken from it.* And in the 319th page he says, "But by attention to the lungs he (Dr. Philip) thinks he can tell the early symptoms that are and that are not attended with tubercles." What will the reader say when he is informed that I have devoted no less than nine pages to prove that the presence of tubercles cannot be known by the early symptoms, but only by those of a very advanced stage; and to point out what I consider the best means of detecting their presence? and these pages commence in page 398 with the following sentence:—"When we are assured that organic disease is established in the lungs, the case is nearly as hopeless; *for it has generally made great advances before we are assured of its presence.*" I cannot suppose that Dr. Johnson wilfully misrepresents; but such unaccountable carelessness in a man who undertakes to judge his brethren of the profession, and instruct the public respecting their works, is little better than intentional error.

But enough of such criticisms, which bring the reviewer to the middle of my treatise. The *critique* of the remaining 200 pages, including the whole of the practical part, the result of an uninterrupted devotion to the duties of the profession for 30 years, although in the same style, is less objectionable, being comprised in a line and a half. This part I suppose the Doctor has not even condescended to open, a presumptive proof of which has just been given.

Ignorant as Dr. Johnson has proved himself, not only of every part of my treatise, but even of the objects proposed by its publication, the reader may naturally ask what can be his motive for the unmeasured severity bestowed on it. I have no wish to animadvert on his general merits as a reviewer; but I may be allowed to suspect, after the proofs laid before the reader, that other considerations than the merits of the work he professes to review, occasionally influence his judgment. It is impossible that a former dispute between Dr. Johnson and myself should not recur to my mind; but this must, on his part, have been an additional motive for candour.

His industry in collecting materials for his Journal is highly commendable, and, on the supposition that they are judiciously selected and accurately set forth, he gives his subscribers an ample equivalent; but if we see the contents of the books that are in our hands carelessly and inaccurately stated, how shall we rely on the account of those which we have no opportunity of seeing—on which the chief value of his Journal rests?

PATHOLOGY OF RHEUMATISM.

To the Editor of the London Medical Gazette.

SIR,

THE accompanying narrative appears to me well worthy of a place in the pages of the Gazette. It displays, in a very striking manner, that succession of morbid actions, the investigation of which constitutes so important, but so neglected a branch of pathological science. A public hospital affords no field for such pursuits, and it is not often that in private practice we are enabled rigidly to pursue them. A military hospital, however, is admirably adapted to the purpose, as the inquiries of the late Mr. Rose concerning secondary syphilis amply testify. Mr. Broughton did me the honour to consult me several times during the progress of this instructive case; and it is to the interest which I always felt in it, that I owe the communication which I take the liberty to enclose.

I am, Sir,

Your very obedient servant,
GEORGE GREGORY.

31, Weymouth Street,
Sept. 23, 1830.

Medical History of an individual in whom Rheumatic Fever was succeeded by Pericarditis, Hypertrophium Cordis, and Hemiplegia, terminating fatally at the end of four years and four months, with the appearances on Dissection.

By S. D. BROUGHTON, F.R.S.

Surgeon to His Majesty's Second Life Guards,
&c. &c.

The subject of this history was a stout

recruit, W. Scruton, æt. 19, who, shortly after his admission into the regiment, in the year 1826, was attacked with acute rheumatism of a very severe type.

April 3, 1826.—Taken into the hospital, complaining of pains in all the joints and limbs; face flushed; pulse 180, and strong, white tongue, with slight inflammation of the tonsils and arch of the palate.

Hauftus Sennæ c. Magn. Sulph. st. s.
Pulv. Jacobi, gr. viij.
Calomel, gr. iij. M. cap. nocte.
Gargar. commun. sæpè utend.
Diet—Spoon. Balneum ad 96.

4.—Pains and fever abated.

Mistura Salina Antimonialis. 4tis horis.
Rep. Pulv. ut antea.

6.—Knees and ankles swelled and tender; tongue and skin moist, and the bowels open; pulse reduced in strength and frequency.

Vini Colebici, ʒss. in misturâ.
Pulv. Ipecacuanhæ, comp.
— Jacobi. a. gr. v. M. cap. nocte.
Fotus Decocti Papav. parti. dolenti.
Soft flannel rollers to the lower limbs.

7.—Swelling and pain of the joints abated; pain now referred to the sternum; urgent cough, and full strong pulse; urine turbid.

Omit the Colchicum and Dover's Powder.
V.S. ad ʒxxiv.
Mistura Salina Antimon. 4tis horis.
Rep. Pulv. Jacobi cum Cal.
Vespere—Hirudines, xxx. sterno.
Balneum ut antea, et rep. quotidie.

8.—Blood drawn yesterday highly cupped and buffy; faint after the leeches; symptoms generally relieved; subsequent swelling of the left wrist, with pain; urine clear; skin and tongue moist; pulse frequent; cough, without pain on inspiration.

Træ. Digitalis, cum Mistura, mxx. ad xxv.
Emplastrum Lyttæ pectori.

15.—He has gained ground daily; pulse 76; diet—low.

19.—Pulse 130; the swelling of the wrist subsided; pain at the sternum, and cough upon inspiration; tongue dry and furred.

V.S. ad ʒxxiv.
Mistura ut antea.
Rep. Pulv. Jacobi c. Cal.
Diet—Spoon.

April 20th.—Symptoms abated, and the pulse reduced. Respiration easy.

Pergat.

25th.—Pulse 130; pain of the left side, without cough.

Hirudines, xxx. lateri.

Rep. Mistura.

Cap. Vin Colchici, 5j. nocte.

26th.—Slept well; much relieved.

Sumat Colchicem, 6tis horis.

Rep. Mistura et Pulv.

27th.—Disposition to intermittent pulse. Some pain periodically recurring, and referred to the region of the heart. The heart acts strongly against the ribs, and he complains of a sense of suffocation when he lies upon his back, but breathes freely when upright.

Omit the Colchicum.

Hirudines decem regioni cordis.

April 28th.—Feels low, and is restless. Pulse 60, and intermits about every fourth beat. The heart bounds under the hand. At times he is incoherent, and always repeats the last word of every question put to him.

Omit the Digitalis and Antimony.

Emplastrum Lyttæ nuchæ.

Mistura Camphoræ, 3ss.

Spirit. Ætheris Nitrosi, 3j. M. cap. ter die.

April 29th.—Recovered his self-possession. Pulse as before.

Infus. Ros. cum Magn. Sulph. 3ss. ter die.

Diet low, with arrow-root.

May.—The state of the patient has varied but little, and he has been free from urgent symptoms, excepting a minor recurrence this month of pain at the sternum, the pulse rising to 100, with a little cough.

Omit the mixture.

Mistura Salin. c. Digital. et Antim. ut antea.

Upg. Ant. Tart. sterno.

Diet—Spoon.

June 24th.—These symptoms subsided, and the pulse returned to 60 again; and he enjoyed convalescence.

Rep. Infus. Ros. &c.

Diet low, with mutton-chop. Arrow-root.

The hand applied to the region of the heart produced a sensation as if the cardiac motions were impeded by adhesions of the pericardium, and the heart itself was greatly enlarged. Being of quiet and regular habits, and having

been some time convalescent, he was discharged the hospital, and put upon such duties as required little or no bodily exertion, and he continued in good health nearly four years, during which period he was never excited by drinking, and was regular in his habits.

1830, May 6th.—This morning Scruton was found in the privy, lying upon the floor in a state of complete insensibility and stertorous breathing. His clothes bore marks of diarrhœa; his pulse was strong, full, and 130. He was carried into the hospital about five o'clock in the morning. The assistant-surgeon, Mr. Miles, immediately took from a single orifice in the vein of one arm 64 ounces of blood. In about five minutes, at the filling of the third basin, the patient opened his eyes, and shewed signs of some degree of consciousness. After this period, the pulse sinking, the arm was bound up. In the course of the day he became more sensible to external impressions, was restless, applied his hand to his head, and sobbed frequently. He had no power over the right side, and could only say, "yes" and "no." The integuments had not lost their sensibility. He could not thrust out the tongue, but appeared to apprehend when spoken to. There was a heaviness about the eyes.

Enema commun. stat.

Lotio Saturni, capiti raso.

Hirudines xij. temporibus.

Mistura Salina Antimonialis. 4tis horis.

Diet—Spoon.

He daily, but gradually, recovered some degree of consciousness. He became less restless, and could move on the right side a little, and put out his tongue when told to do so; but his mouth and tongue were drawn to the left side when moved.

His words are limited to "yes" and "no," most generally the latter, repeated three or four times. When intending assent, "yes" is expressed with a nod of the head; and when dissenting, he shakes his head.

Pergat.

In a few days he became very noisy when he wanted any thing, and cried out very loudly at night, dosing much during the day time. His stomach often rejected fluids, which he was urged to swallow in copious draughts. Mutters incoherently at times. Very little urine.

Weak wine and water, or diluted brandy.

Empl. Lyttæ Nuculæ.

Blister to be dressed with Ung. Hydrar.

Pil. Cal. c. Colocynth. pro re nata sumendæ.

May 16th.—Tongue latterly dry and brownish. Pulse quick. Very riotous.

Omit wine and brandy.

Ice applied to the head.

Misturæ Salinæ, ℥iss.

Spirit. Ætheris Nitrosi, ℥ss.

Tincturæ Hyoscyami, ℥j. M. cap. 4tis horis.

Empl. Lyttæ pedibus.

The pulse became less frequent, and he was more tranquil in a few days. His appetite improved to voracity, and he gained considerably in strength and consciousness. He could move the affected arm, and walk by dragging the leg after him. His spirits were good, and he went out to see his friends. He took no medicine, excepting a little aperient occasionally, and meat was allowed once a day, with a little diluted wine, or two tea-spoonfuls of brandy, in his arrow-root. His speech was still limited to "no" and "yes."

July 28th.—He removed with his regiment to Brighton in very hot weather, from which he appeared to suffer much inconvenience. On his arrival at the hospital he was weaker, his heart beat strongly, his tongue was loaded with a brown crust, and sordes were collected about the teeth, and the pulse was frequent.

Pil. Colocynth. c. Cal. ℥ss. p. r. n. sumend. Spoon diet.

August.—This excited state wore off, and his tongue got clean and moist, but he did not recover strength; his appetite varied, but was usually bad; his bowels acted freely, and his pulse became tranquil. Sometimes he rejected all food, especially if it were liquid, unless a little wine or brandy were added to it. He occasionally experienced severe fits of dyspnœa and rapid action of the heart, and latterly some degree of yellowness appeared in the eyes and about the face, neck, and forehead.

Broth, arrowroot, and one egg.

Hauftus Efferves. c. Træ. Cinchonæ, ℥ij. ter in die.

Some amendment occasionally took place; but after frequent relapses he

sunk into a state of imbecility, and died on the morning of the 27th of August, 1830.

Sectio Cadaveris, 26 hours after death.

—The vessels of the dura mater and the longitudinal sinus distended with blood, and the right hemisphere of the brain in a state of general congestion. The left hemisphere diminished in size, and the vessels full. In the middle lobe of the brain there was a sac, containing about ℥ij. of a thick curdly fluid, appearing as if the cerebral substance was broken down and diffused in it, and somewhat resembling pns. A delicate membrane partially enveloped this fluid, and upon it vessels ramified, one of which was of the size of half a line in diameter, close to which was a brownish yellow spot, occupying the space of a sixpence. The parietes of the sac seemed to be formed of the grey portion of the brain. The ventricles contained about an ounce and a half of serum, and about an ounce was found in the base of the skull, probably escaped from the ventricles in opening them. The choroid plexus was very large. The cerebellum was in a natural state.

On opening the thorax the heart appeared to occupy a considerable portion of the cavity, the pericardium adhered to the heart every where closely, and this membrane was much thickened. The right auricle and ventricle were sound, and filled with coagula; and the walls of the left were much thickened. Above the bicuspid valve there was a granular layer of apparently fatty matter, firm in consistence; and a sort of fringe work of tassels of fat, each about three quarters of an inch long, and a line in width, presented itself at the margin of the auricle. A similar formation appeared among the carneæ columnæ, but not so largely developed, and the carneæ columnæ themselves were much enlarged. The left auricle and ventricle were filled with coagula. The pleura generally adhered to the walls of the thorax by lengthened bands of coagulable lymph, and particularly so about the pericardium, all the reflexions of which were matted together. Some yellow serum was deposited in the different sacs formed by the adhesions of the right side, and not more than two ounces of bloody serum appeared in the bottom of the thoracic cavity of this side, and none in the other. The liver appeared to be granulated, the

gall bladder was distended with bile, and the ducts were quite free. The rugæ of the stomach were strongly developed, and the villous coat was slightly injected, arising probably from the frequent exertions of the stomach to empty itself. The spleen was perfectly healthy, and so were the intestines, excepting a contraction of the sigmoid flexure and the descending arch of the colon, and several rugæ about the great arch.

The urinary bladder was full.

Previous to preparing the heart as a specimen, it was found to weigh about one pound and three quarters.

P.S.—The examination of the body was made during my absence from Brighton, by Mr. Pickford, late assistant-surgeon of the Grenadier Guards, assisted by Mr. Lawrence, a medical pupil, of Brighton; and I am indebted to them for the above accurate details.

REMARKABLE CASE

OF

TUBERCULAR EXCAVATION

Communicating with the External Air through an Aperture between the Ribs.

Mr. MACKLIN, æt. 47.—His symptoms at present, July 25, 1830, are frequent, small, troublesome cough; expectoration of yellow, puriform sputa, occasionally tinged with blood, and rather abundant; pain at times in right side of chest and shoulder; decubitus on left side only, with head rather high; aspect phthisical; disposition to perspire at nights; pulse feeble; appetite good.

Chest narrow, contracted; on deep inspiration left side only expands; right shoulder droops. Immediately below the right sterno-clavicular articulation, but rather nearer the shoulder, the integuments for a space of two inches, or rather more, in diameter, are reddish and very thin. On coughing or expiration, they swell out into a tumor nearly as large as a goose's egg, which almost seems ready to burst. The integuments are drawn inward on inspiration. Great part of the sternal end of first rib, and right side of upper bone of sternum between first and second rib, are absorbed, and the space between

the first and second rib is consequently enlarged from above downwards. The integuments here and the neighbouring bones are very tender on pressure.

Percussion and Auscultation.—Whole of left thorax sounding tolerably sonorous. Respiration in this side unequal, but generally puerile; no râle, nor pectoriloquy.

Lower part of right thorax anteriorly, and right back dull upon percussion. The respiration in this side imperfect every where, but especially so below, although almost cavernous above; no pectoriloquy heard, but gargouillement on coughing, at the apex of the lung.

History.—Three years ago was in good health, but suffered from a cough the preceding winter. In October 1827 his wife died of confirmed phthisis, which had lasted for two years. In the succeeding February he caught a cold, for which he treated himself at first, but without success. Mr. Cosgreave was called in and prescribed for him. Cough, with more or less expectoration, remained, and in the winter of 1827-8 he went to Madeira, where he gained flesh surprisingly, but never lost his cough. In the spring of 1828 he returned, and from that time till a month or so ago he still continued to suffer from the cough and expectoration, with occasional pain in the side and emaciation. Three weeks or a month ago emphysema of the right side of the neck, and parts contiguous to the tumor, took place; it subsided in a few days. After the subsidence of the emphysema, the tumor below the right clavicle was discovered by Dr. Johnson. Within the last three weeks the integuments have grown thinner.

Plaster and roll to defend the thin integuments from bursting; sedatives; moderately good diet.

26th.—Awoke last night and found that the integuments had given way, without any particular exertion of which he was aware. Suffers little aggravation of the symptoms in consequence. Discharges air through the aperture at each expiration.

Light Compress.

Aug. 1st.—A considerable quantity of purulent discharge issues from the wound on coughing; expectorates by the mouth little less than glairy mucus (probably from bronchi and other lung); feels inconvenience if the dressings ob-

structed in any way the egress of matters from the wound; cough troublesome.

Pil of Morph. Acet. and Conium. ter die ;
ale, meat, &c.

Monday, 9th.—We examined the patient. The expectoration by coughing, from the aperture between the ribs, was very considerable, and attended with a loud discharge of wind, so much resembling a common cough, that it was difficult to say whether the noise was made by the mouth or the intercostal aperture. Very little expectoration now comes from the mouth, except when in the horizontal position, when a small proportion is discharged in the common way. The cough is still more troublesome than before the new opening took place—he wastes in flesh—and the total discharge is increased. He has, however, no fever; and he sleeps a little by the aid of Battley's sedative. He takes sulphate of quinine in acidulated infusion of roses.

22d. The patient has daily lost ground; and there has lately come on a colliquative diarrhœa, which opiates and absorbents cannot check. The expectoration from the external wound continues profuse, and the rush of air, at each expiration, and especially when coughing, is considerably greater than that which is emitted by the trachea and larynx. The constant discharge from the wound now renders his life a burthen to him, and death is become acceptable. On the 24th of August he expired. The body was examined by Dr. Dill and Dr. Johnson. The following is Dr. Dill's report.

Inspection.—The body was much emaciated—the skin covering the external ends of the second and third ribs of the right side was ulcerated, and a fistulous opening, which communicated with the right thoracic cavity, was formed in the intercostal space between them. On removing the sternum and cartilaginous portion of the ribs, it was found that this fistulous aperture terminated in an immense cavern within the right lung, which was capable of containing at least one pint and a half. This cavity was lined with a tolerably dense membrane, which adhered both anteriorly and behind to the ribs, and, although in some parts there intervened between this sac and the costal pleura a small quantity of pulmonary paren-

chyma, which had not been as yet destroyed, in general no remains of lung could be perceived beyond the sac, which was in immediate union with the pleura which lined the chest. The destructive process which had formed this enormous cavity within the substance of the lung, had extended anteriorly through a portion of the sac and costal pleura to the ribs, the sternal ends of the first two of which it had rendered carious, and the third and fourth were so far diseased as to break with ease when but slightly pressed upon. Across the lower half of this tubercular cavern ran, in an oblique direction, a small shred of lung, which appeared to consist principally of the pleura, which had lined the sulcus between the superior and middle lobes; and towards the left side of the floor a fistulous opening was discovered, which admitted the extremity of the little finger. By slitting down the division of the trachea which is devoted to the right lung, the third branch, which this tube subdivides into, was found to terminate in this opening; and in its immediate neighbourhood was seated another aperture, which was likewise the termination of another branch. It was principally through these openings that the matter which was expectorated by the mouth made its way into the trachea, and these free outlets, aided by the external aperture upon the surface of the chest, had furnished such a ready exit to the contents of the cavity, that, although almost all the upper and middle lobes were destroyed, there was scarcely any tubercular fluid in the sac. The lower lobe was also extensively diseased and contained several smaller cavities, which freely communicated with that now described. One of these cavities, large enough to contain a pigeon's egg, in place of being ragged, uneven, and suppurating like the rest, was lined with a fine, smooth, mucous membrane. This cavity had been obviously the seat of previous disease, which nature had arrested by forming this artificial membrane; but as the remainder of the lung—even that in the immediate neighbourhood of this healed vomica—was irretrievably disorganized, this sanative effort could have given but a trifling, if any, check to the progress of the symptoms. The right lung was in a tolerably healthy state, having only a few hard tubercles imbedded in its

upper lobe, and the heart exhibited no manifestation of disease.*

RUPTURE OF THE UTERUS.

To the Editor of the London Medical Gazette.

Castle Hedingham, Essex,
Oct. 7, 1830.

SIR,

THE case of ruptured uterus, reported in your last, appears to me so extraordinary that I must beg leave, through the medium of your Gazette, to request Mr. Macintyre will favour me with a little explanation.

In the first place, I cannot reconcile the rigid state of the os uteri, with the *cold sweat, anxious countenance, feeble pulse*, and other symptoms of general relaxation in the patient. Secondly, I cannot understand how a rupture in the uterus is to be detected when the os uteri is so closely contracted as hardly to admit the point of the finger; but what is still more extraordinary, with this contracted state of the os uteri he was enabled, not only to trace the extent of the laceration, but his friend, Mr. Dalton, succeeded in grasping and bringing down the feet of the child. How all this was accomplished I cannot comprehend, and I must say I am equally at a loss respecting the difficulty experienced in bringing the head through the outlet of the pelvis. Surely when Mr. Dalton had extracted the lower extremities, he might have turned the body of the child in such a manner as to have brought the face towards the back of the mother; then, had the head not readily passed, one finger introduced into the child's mouth would have brought the forehead into the hollow of the sacrum, and all would have been finished with little trouble. I shall say nothing of the threatened protrusion of the intestines, till Mr. Macintyre has favoured me with some further explanation of the case; but I must observe, the female practitioner, as is very generally the case, appears to have been a very ignorant person, or she would not have expected the immediate expulsion of the head before the os uteri was dilated, neither could she, under such circumstances, positively

say whether the presenting part was the head or the breech.

I must now beg Mr. Macintyre will not take offence at the foregoing remarks. My present opinion is, that some part of his case has been accidentally omitted, which, if inserted, would have rendered the whole perfectly intelligible.

I am, Sir,
Your obedient servant,
G. HARVEY.

SECOND REPORT

OF

PROFESSOR MOTT'S CASE OF ANEURISM,

Treated by Tying the Artery Ultra Tunorem.

IN the preceding volume of the Gazette, page 61, will be found an account of a case in which Dr. Mott performed Brasdor's operation for aneurism. At the time we inserted the former report, the result was supposed to have been successful: we regret, however, to state that the case in question adds another to the list of unsuccessful efforts to prolong life by this method of operating. The unfortunate result of the trials it has met with in this country, France, and America, afford little encouragement for its more general adoption. What we subjoin is from the American Journal of Medical Science.

After the return of Moses Gardner to the country, he occasionally wrote to me: one of his letters stated, "his breathing was much better, and his friends on calling to see him, were surprised at the improvement, particularly at the disappearance of the tumor." On the 22d of April, however, I received information of his death, with an invitation to examine the body: all that could be ascertained relating to the case was, that the difficulty of breathing had returned, and at times threatened immediate suffocation. He had confined himself to the most abstemious living, and gradually declined in general health. The dissection was conducted by my demonstrator, Dr. Vaché, to whom I am indebted for the following particulars.

Dissection.—On viewing the body, no tumor appeared externally: the right

* Medico-Chirurgical Review.

clavicle was rather more elevated than that of the opposite side, and on removing the integuments, it was found partially dislocated from its sternal articulation, the under surface of which has undergone considerable absorption from the pressure of the aneurism. Immediately beneath, and imbedded in the surrounding parts, was the tumor: it extended from the sternal extremity of the left clavicle along the inner and upper surface of the sternum, to which it closely adhered to about midway of the right clavicle, and pressed as low down upon the pleura as the third rib. Laterally it was adherent to the right lung, and posteriorly rested upon the lower cervical and upper dorsal vertebrae.

The trachea was greatly displaced; it was closely attached to the left side of the tumor, passing obliquely downward and backward, and very much flattened by pressure.

On removing the tumor from the body with its connexions, it was about the size of the two fists, and its parietes were found to be firmly consolidated. It emanated from the arteria innominata, involving the subclavian and the root of the carotid. Superiorly it was of a globular form, and inferiorly terminated in an apex, which passed down below the division of the trachea, and behind the aorta. The right carotid was obliterated: the right subclavian, beyond the tumor, was pervious and natural in its structure. The heart and lungs were sound."

On reviewing briefly the circumstances of this case, no one, I may venture to observe, will attribute its fatal termination to a failure of this form of operation, or of the principles upon which it is founded. The attending symptoms, as well as the dissection, fully prove the cause of death to have been the displacement of the trachea, and the consequent pressure of the consolidating tumor upon it and the bronchial tubes. The absence of pulse in the right arm, the œdema, and the numbness, must also be attributed to the pressure of the tumor. Had the operation been performed at an earlier stage of the disease, there is every reason to expect it would have terminated successfully. Should I have another opportunity, I will operate without any delay, and tie both vessels at the same time, and not leave one for a future performance, to be decided upon by the effect of the first.

MEDICAL GAZETTE.

Saturday, October 16, 1830.

"Licet omnibus, licet etiam mihi, dignitatem *Ar-
tis Medicæ* tueri; potestas modo veniendi in pub-
licum sit, dicendi periculum non recuso."—CICERO.

THE METROPOLITAN SOCIETY OF GENERAL PRACTITIONERS.

SOME months ago we published the Prospectus of this Society, which was then about to be organized, and which has since been established; and we last week had the pleasure of publishing the Address, in which the associated general practitioners explain more fully their "intentions and objects."

For our part we have no hesitation in saying that we approve highly of their resolution of forming reunions for their mutual benefit and advantage; nor do we see why, as they themselves have said, "when almost all public bodies, whether professional or commercial, form associations, corporations, or companies, for the purposes of legislating for their mutual protection and for the advancement of their prosperity, it should be found that no association of the numerous class of medical men comprehended under the term, General Practitioners, has till now been formed." The persons, indeed, who are known by this denomination, have of late years formed a numerous and peculiar class in the community; and the only wonder is that they have so long kept asunder—that they lived, in fact, so much sporadically. But the late decision of Lord Tenterden in their favour seems to have given a considerable degree of impetus to their latent affinities; they seem to feel themselves almost unconsciously elevated into greater importance by it, and unexpectedly raised to a higher rank in society.

They complain of the degraded, the undeservedly low rank which they occupy in the community; and they sum up their grievances in such terms as these:—"Perplexed by multifarious duties—threatened by extensive responsibilities—oppressed by physical exertions—disturbed by conflicting interests—assailed by jealousies—harassed by intrigue and envy—injured by corporate privileges—insulted by legal enactments—and degraded by an opprobrious mode of remuneration—the general practitioner has more evils to cope with than he can hope to combat successfully by the unassisted force of his own mental and physical exertions." The advantages of adopting the co-operative system are then pointed out and recommended; and, in short, the actual formation of the Society is formally announced.

We trust it will not be imagined for a moment that it is our intention, in the detail of these circumstances, or in any remarks we may have to offer upon them, to utter any thing offensive to the numerous and important body to whom they refer: we mean them no disrespect; but in the spirit of candour and good feeling, we would suggest a few hints worthy of their calmer consideration, and which may tend to set the true state of the circumstances in a more intelligible point of view.

We would inquire into the grounds of their discontent, and ascertain, if possible, how their present condition might be improved; and our observations, such as they may be, shall be simply founded upon their own shewing—upon the document they have given to the world.

It would seem to us, then, in the first place, that they permit themselves to be deluded by their appellation; they assume from the fact of "their services being dedicated to the practice of their profession, through all its extensive

ramifications of medicine, surgery, pharmacy, and midwifery," that they should hold, at least, no *subordinate* station to the members of the medical corporations "in the social and intellectual ranks of the republic of medicine." There is much magic, as it is represented, in the name of "general practitioner"—an epithet "as honourable as it is descriptive, inasmuch as it denotes the possession of qualifications adequate to all the emergencies of an arduous profession." They are, moreover, dazzled apparently by the extension of the qualifications required by the Society of Apothecaries, while they resolve "to adopt such policy as shall secure for its members the civil and literary respect to which their education, attainments, and practice, entitle them."

This naturally induces us to inquire into what may be the obvious difference in qualification between a member of the old corporations, and a general practitioner of the new regime. Of course we take for "our exemplar and our theme" an *average* number of each. We may thus be enabled to discover whether the public have any good reason for looking to the former in the last resort, and presenting him with the larger remuneration.

And here two reasons immediately present themselves. Admitting the superstructure to be even equally imposing in the case of the general practitioner, the public attach a superior degree of importance to the character of the *élève* of the olden institutions—from the heretofore well grounded persuasion of his having acquired a more liberal early education, and a consequent superior capacity for medical knowledge,—not to mention the general influence which the circumstances under which he is in other respects placed must immediately have on the mind of the million.

The want, then—at least in times past—of a more liberal education—the circumstance of having spent in an apprenticeship, too often both unprofitable and degrading, the time which others have passed at a University—would seem to be the *first* deficiency which is discerned by the public in their intercourse with the general practitioner.

The *next* is clearly the result of his more obvious and external circumstances: it is the effect of his combining a trade with his profession—he humbles himself *voluntarily* by his keeping a shop; nay there are some—not many, it is true, but some there are—who sell soda water, ginger beer, perfumery, and matches. The public cannot be reasonably expected to see in such a person the man to whom they would intrust, in the last resort, all that they hold most precious in the world—their health—their lives: they cannot see in him, when he comes about the sick chamber, that excellence, real or supposed, which is commonly conceded to the alumnus of the established corporations—so generally is it admitted that the man of more liberal education is the man of greater influence—that “knowledge,” in fact, “is power;” and among general practitioners, he who practises the healing art more as a profession and less as a trade, always ranks the higher in public estimation.

It stands to reason, as well as to the impression on the public mind, that without sufficient foundation the building or superstructure must be of little worth; and the more extensive the scale of its greatness, the less entitled is it to confidence in its stability. The general practitioner lays the plan of a great but unwieldy structure, with the various and multiplied purlieus of which, supposing that he should have ever succeeded in realising it, he cannot possibly become acquainted, or his acquaintance must be in truth most superficial.

Throughout these remarks, we repeat we wish it to be understood, we speak of classes rather than of individuals—we take the average condition of the persons to whom we allude.

Now with respect to the best mode by which the general body may emerge from that grade in society to which they complain of being most unpleasantly confined, the plan of reunion—the club or co-operative system—may be as good as any. The advantages of such combinations are too obvious and well understood to require remark; but we should advise the utmost caution to be observed in the further measures which they adopt. The allurements of ambitious aspirations should be carefully guarded against; and we are the more desirous that they should attend to this, from what we have observed in the conduct of the questionable guides to whom the management of the general concern is entrusted—all that relates to “the integrity and the general interests of the body.” “Medical politics (say they) have decidedly taken a bias unfavourable to the general practitioner, and he stands, not only unprotected in his professional character by the fostering hand of a generous government, *but legislative enactments have actually been passed which oppress and degrade him*; his privileges are trampled down by the assumptions of unjust, self-created, arbitrary power, and the defence of his rights confounded by the hazardous jurisprudence of legal misrepresentation.” What the probable meaning of this last phrase is, we will not venture to say; and as to what precedes it, we must confess ourselves at a loss to know what legislative enactments are those which are here complained of as oppressive and degrading. The same spirit of determination, too, seems to animate the writer as he continues to recommend the collection of a fund, by which the Society would be

enabled to "appeal to the legislature, and to persist steadily against *oppression and opposition*, until the general practitioner shall have obtained a distinct and legal recognition of his rights, privileges, and rank, and have *burst every trammel that binds him down to a degraded subseriency*." These are surely big, if not bombastic words, and we would seriously advise the body to beware of the intentions of any man who could thus express himself.

What we would further advise the general practitioner, in aid of his views of emerging, is a thing of essential importance. He should begin by doing that which requires no legislative enactment—that which depends upon himself. Let him give up that part of his present vocation which really tends to degrade him in the eye of the public—keeping a shop. As long as any one who calls himself a general practitioner consents to deal out penny-worths of salts, and to compound the prescriptions of other men, so long he does and must fill a subordinate station in society, and can have no pretension to an equal rank with the members of the other medical corporations, who practise their art exclusively as a profession—not a trade. If it be said that shops must be kept—that the business of the apothecary must be carried on—why then we have only to answer, let him not complain if, as society is constituted, he be regarded by its members as holding a rank inferior to that of the physician. This truth may be unpalatable, but *it is a truth* nevertheless; and every man of common sense must feel that any one who attempts to persuade him that it is otherwise is merely playing upon him—addressing himself to his vanity, at the expense of his judgment.

But one word more ere we conclude. We have no disposition to be unfriendly, or to draw odious comparisons; but

we cannot help thinking that the argument in the paper before us bears some resemblance to the supposable case of a portion of the legal profession—those technically styled attorneys—setting themselves up as a sort of general practitioners in the law, to do the work of chancery, equity, common-law barristers, sergeants, conveyancers, pleaders, and the like, and founding a claim to superiority on the more extended sphere of their usefulness. But we trust it is unnecessary to draw a parallel or contrast of this description. The general practitioners of the metropolis have only to form their association for their mutual comfort and convenience, and to proceed with propriety and moderation, in order to secure the good opinion of their brethren of both Colleges, and the respect and confidence of the public at large. Nay, we will go farther, and say that the general practitioners have made such advances in improving their condition—by improving their education—as to hold out to the other corporations an example worthy of their imitation; and here it would be unjust if we withheld our tribute of praise from the Society of Apothecaries, for their meritorious, well-directed, and successful exertions to raise the branch of the profession to which they especially belong.

DR. ELLIOTSON'S LECTURES.

At the request of Dr. Elliotson, we intend to postpone, for a short period, the publication of his course on the Practice of Medicine. The delay will enable us to lay these lectures before our readers under more favourable circumstances; and in the interval we shall give some clinical observations, in addition to the papers announced in previous notices as about to appear in our ensuing volumes.

MEDICAL LITERATURE.

Two works are on the tapis which are likely to interest the medical profession. Both are somewhat on the plan of the "Libraries" and "Cyclopædias," at present so much in fashion. The chief difference between the proposed works seems to be in their respective extent, one being intended to embrace the whole range of medical science—the other being more limited to subjects of a strictly practical nature. We understand that the assistance of men of eminence has been secured by both parties, and such works, if well executed, are certainly calculated to supply a blank which exists in the medical literature of this country.

EXTRACTS FROM JOURNALS,

Foreign and Domestic.

ANOMALIES IN THE DISTRIBUTION OF SOME OF THE VEINS.

MECKEL, in his *Archiv. für Anatomie und Physiologie*, for 1829, relates three interesting instances of anomalies in the venous system. The subject of the first was a man of sixty years of age, who had died from cancer of the œsophagus; a considerable venous trunk, originating in the left lung, and terminating in the subclavian of the same side, was observed.

The second case occurred in a hydrocephalic fœtus; the vena azygos opened into the left subclavian.

The subject of the third case was also a fœtus, and with hare-lip and division of the palate; the inferior vena cava followed the usual course of the vena azygos, and opened like the latter into the superior cava; the hepatic veins were united into a single trunk, and resembled in their disposition the inferior vena cava, penetrated the foramen of the latter in the diaphragm, and opened into the right auricle.

TREATMENT OF BURNS.

Dr. Dorfmutler recommends the following as local applications in burns

—the general treatment being similar to that usually adopted:—Of saturnine extract and olive oil, equal parts; rose water, as much as may be required to form a liniment by trituration with the above. If any part of the ulcerated surface suppurates too copiously, it is to be dressed with the following ointment:—Oxide of zinc, lapis calaminaris, powder of lycopodium—of each one drachm; myrrh and acetate of lead—of each 36 grains; purified lard, washed with rose water, an ounce and a half.—*Heidelberg Klinische Annalen.*

HERNIA OF THE STOMACH,

With Enormous Enlargement of that Organ.

This case was communicated to the Royal Academy of Medicine by M. Yvan. The subject of it was a soldier, who for some years had had a scrotal hernia, which could be easily reduced by taxis, but could not be kept up; it gradually increased in size, and a month previously to his death repeated vomiting took place, which could not be arrested, although there was no strangulation, and the patient died. On examination the abdominal ring was found to be enormously distended, measuring eighteen inches in circumference; the hernial sac contained the inferior third of the stomach, the greater omentum, the small intestines, and the large intestine, except the iliac portion of the colon, the cæcum, and the rectum. The stomach, situated parallel to the axis of the body, was of an enormous volume, and seemed divided by a circular depression into two portions; the one situated in the abdomen, the other in the hernial sac. The length of the great curvature of the stomach was three feet, that of the lesser curvature eighteen inches; its circumference at its largest part twenty inches, and contained nearly eleven pints of fluid. Longitudinal and circular muscular fibres were observed on the surface of this organ. M. Y. deposited the stomach in the museum of the academy.—*Archives Générales.*

TASTE OF SULPHATE OF QUININE.

M. Schweinsberg states in *Geige's Magazin für Pharmacie*, for Oct. 1829, that the best mode of correcting the

bitterness of the sulphate of quinine is, not to mix it with syrup, but with an aromatic powder. The sulphate of quinine is so intensely bitter that a mixture of one part of this salt with one hundred and sixty parts of sugar is still sensibly bitter; but if one part of the salt be mixed with ten or fifteen parts of powdered *valerian*, fennel, aniseed, orange peel, &c. the mixture possesses scarcely any bitterness.

PHOSPHATE OF QUININE.

Dr. Harless, of Bonn, has found the phosphate of quinine (slightly acid) a much pleasanter remedy than the sulphate of quinine, or the free alkali. The phosphate, he says, agrees better with irritable stomachs, with nervous persons, or with those who are subject to irritations or inflammations; its employment does not produce the uneasiness which sometimes follows the administration of the sulphate. It does not so readily accelerate the actions of the heart, or irritate the bronchia or lungs. On account of its insolubility, it must be given in powder or pills; the dose is from one to four grains.—*Bull. des Sc. Méd. from the Heidelberg Klinische Annalen.*

REAL BRONCHOCELE.

Real bronchocele, M. Larrey says, consists of one or several tumors filled with air, which during its forcible compression in the upper portion of the trachea, the larynx, or the mouth, has produced small hernie of the mucous membrane; these tumors rapidly increase in size, so as not unfrequently to exert a violent pressure on the vessels of the neck. They are situated in front, or at the sides of the larynx, between the hyoid bone and the thyroid cartilage, or between the cricoid cartilage and the first tracheal ring, and are invariably produced by violent exertion. The most characteristic symptom of this kind of bronchocele consists in the disappearance of the tumor under compression. In Egypt we frequently observed this kind of bronchocele in the blind, who are very numerous there, and who are employed by the priests to chaunt at the top of the minarets. It generally happens, that after two or three years, such persons became totally unfit for this office, on account of the occurrence and subsequent increase of these tumors. Since M. L.'s return

from Egypt, he has had the opportunity of observing two cases of bronchocele in two subaltern officers, who had for a considerable time been employed as military instructors. One of them had near the larynx two tumors, which were free from pain and crepitus on pressure. They were of equal size and globular form, and the skin by which they were covered was rather tense, but without any morbid alteration. Both individuals had almost entirely lost their voice, being unable to make themselves understood by words, except whilst forcibly compressing the tumors. They were also obliged to breathe with their mouths wide open. In consequence of the continued pressure on the vessels of the neck, the jugular veins had become enlarged, and they suffered greatly from congestion within the head. The application of bladders filled with ice, and of graduated compresses with camphorated spirit and liq. ammon. acetat. greatly reduced the size of the tumors, but did not prevent their reappearance on the least exertion.—*Clinique Chirurgicale.*

HEADACHE.

M. Ricord recommends as a cure for this affection a quarter of a grain of morphine in cold sugar and water. M. Mérat has treated four cases with success by this remedy.—*Archives Générales, March 1830.*

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

LA CHARITE.

Case in which a Patient died during Amputation of the Thigh.

In the late revolutionary contest in Paris a non-commissioned officer of the Swiss Guard received a gun-shot wound, which fractured the femur a little beneath the trochanter. After having made incisions and removed the splinters, Boyer's apparatus for effecting permanent extension, was applied. Nevertheless the lower fragment was carried upwards and outwards to such an extent as to shorten the limb by four or five inches. Suppuration became established, and the limb was swollen throughout its whole extent; and this tumefaction continued, notwithstanding

counter openings and other methods being had recourse to. It was soon perceived that the farther attempt to save the limb would cost the patient his life; however, he obstinately refused to submit to the operation, and it was only when the setting-in of hectic fever gave him notice of his approaching end, that he consented to the amputation. M. Roux (perhaps preferring a desperate remedy to certain death—perhaps unwilling to go back from his proposal) was still willing to operate. The patient, before he was taken to the operating-room, shewed farther signs of irresolution, and said he should certainly die under the knife. He was placed on the table, the trunk nearly horizontal, and the pelvis over the end of the mattress. The operator plunged a long knife into the external wound, and brought it out at the internal part, to make an anterior flap; while an assistant applied pressure on the artery in the groin. A posterior flap was formed in the same manner. During this time, the patient was either silent, or moaned but slightly, and M. Roux next set about denuding the bone, for the purpose of dividing it above the trochanter. He appeared for a moment to balance between this plan and taking the head of the bone out of the socket, when, all at once, a livid paleness overspread the countenance of the patient—his eyes became fixed, his jaw dropped, and he was dead. All the usual methods were had recourse to with a view of reviving him, but without avail. Those about him preserved their *sang froid* as much as if the catastrophe had been anticipated.

It is quite obvious that the surgeon could not have been expected to foresee the sudden death which occurred in this case; but as there appears to have been little or no chance of recovery, the propriety of yielding to the tardy determination of his patient, the performance of operations, without a rational prospect of success, certainly ought to be avoided, because every such failure produces more or less influence on the minds of others, thus leading many to refuse their consent to an operation when it affords the only chance of safety.—*Lancette Française*.

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE,
DELIVERED BY DR. ELLIOTSON,
October 11, 1830.

Shaking Palsy, described by Mr. Parkinson—General History of the Disease—Various Remedies—Efficacy of Iron—Disease of the Heart—Hypertrophy—Warty Excrescences on the Valves of the Aorta.

GENTLEMEN,—Twelve cases were admitted under my care last Thursday. The physician whose turn it is to select cases on a Thursday, generally takes to himself as many of those that are deemed acute as he has vacancies for, and distributes to the other physicians the remaining cases, which are for the most part chronic, though they get one or two acute cases when there are more than the selecting physician can take under his care. I received six men and six women. Among the men was a case of shaking palsy—another of palsy of the wrists from lead—one of palsy of half the body, of a very curious nature, as it is not constant, but comes on periodically, a very rare form of the disease—one of very extraordinary convulsions in an adult—a case of anasarca and diseased liver—and one of rheumatism. Among the women there was one case of hysteria—one of syphilis—one of scald head, or porrigo—one of chronic inflammation of the stomach—one of a tumor within the abdomen—and one which appeared to be inflammation of the membranes of the spinal marrow.

Of these I purpose selecting one for consideration this morning—the case of *shaking palsy*, called in medical language paralysis agitans, which I need not say is exactly the Latin for shaking palsy.

The best account of this disease with which I am acquainted has been given by a general practitioner, now deceased—Mr. Parkinson, a highly respectable man, who wrote a short essay on the subject. We shall call the patient F. E. æt. 38, in Williams's ward, No. 20. Now the disease, according to Mr. Parkinson's definition, is involuntary shaking or tremulous motion of more or less of those parts of the body which are naturally subject to the will; we shall see that the shaking is, nevertheless, in a slight degree under the influence of the will. With this shaking—this tremulous motion of more or less of the body, there is diminished muscular power in the parts, and the tremulous motion occurs in them when not in action—while the person is not attempting to move them; and they shake even if you support them. There is likewise a propensity to

bend the head and trunk forwards, and a disposition to change the pace of walking to that of running. Mr. Parkinson also says that the senses and the intellect are unimpaired: his words are—"Involuntary tremulous motions, with lessened muscular power in parts not in action, and even when supported; with a propensity to bend the trunk forwards, and pass from a walking to a running pace; the senses and the intellect being uninjured."

This disease always commences in some one particular part—for instance, the head; but I think it most frequently begins in one of the hands or arms. It will continue confined to the part first affected sometimes for months, and even years, or perhaps always, without any other participating in the disease; frequently, however, though by no means always, it increases both in degree and extent—other parts become affected, and those that were primarily diseased shake more and more, till at last the whole body is in a constant shake. I stated, that although this shaking was an involuntary motion, yet that it was slightly under the influence of the will; for it may be checked for some moments by a powerful effort. This is often the case in St. Vitus's dance—a powerful effort will for the moment occasionally stop the movements of that affection in a particular part. As the disease increases in extent and degree, the person becomes less and less upright, he bends forward, walks on his toes, his steps are quicker and shorter, till at last in locomotion he is almost always upon the trot, and looks as if he were in a most violent hurry.

This circumstance of the patient inclining to a running pace is simply owing, I presume, to the disease being slightly under the will. Of course, the greater the effort of the will, the greater will be the control over the disease; and as it is a stronger effort to run than to walk, the patient finds that he conquers the tremulous motion better by almost running than by walking. It is a curious fact, that if the disease remit in one part, it generally increases in another. If, for example, the leg and arm are both affected, as the latter becomes better the former grows worse. So remarkable is this, that if you take hold of the arm and prevent it from shaking, the leg begins to shake doubly; or if both arms are affected, and you hold one, the other shakes more violently. This too is noticed in St. Vitus's dance. A change of posture when the patient is shaking, to a great degree will partially arrest it. This disease agrees with chorea in another circumstance—the motion ceases during sleep. But when the disease is advanced, and the shaking becomes intense, the same phenomena again take place as in St. Vitus's dance—there is a continuance of the shaking both during sleep and the waking state.

In the usual progress of the disease, the voice is affected; it is usually not, however, till the extremities and the head have been affected for some time and to some extent, that the voice experiences a change. But at last the muscles of articulation suffer, and of course the muscles of deglutition and mastication, so that speaking, chewing, and swallowing, are all exceedingly difficult. The urine and feces at last pass involuntarily, and emaciation takes place, and there is a general decay of the whole system.

This is the progress of the affection when it continues to increase; but very frequently no augmentation takes place. You will see a person with a shaking palsy of the head go on for years without any increase of it, and without the disease extending either to the extremities, the trunk, or the muscles of deglutition, mastication, or articulation. You will sometimes see a person affected in one hand without any extension of the disease. Mr. Parkinson gives a curious case in which a regular paralysis-hemiplegia took place: and the parts which became paralysed ceased to shake, and when the hemiplegia ceased, the shaking returned.

Now this disease is to be carefully distinguished from the tremulous agitations of drunkards. You are aware that these persons who are in the habit of drinking have shaky hands; and this sort of tremor is induced not only by spirituous and vinous liquors, but also by tobacco, strong tea, coffee, and other narcotics. If these are taken in large quantities for any length of time, habitual tremulous motions are produced; and it is only on discontinuing the use of tea, tobacco, strong coffee, &c. that the tremor will cease, which it sometimes will entirely if these be given up, though it seldom does if the cause have been wine or spirituous liquors. This kind of tremor generally affects both hands, and commences or increases on an effort being made to take any thing into, or do any thing with the hand. If a person so affected take up a pen, he can scarcely write, or if he attempt to raise a glass of wine to his lips he nearly spills it. The degree of tremor generally corresponds to the degree of effort. But in paralysis agitans the circumstances are just the reverse—a strong effort will, for a few moments, suspend the disease, and in this way you may distinguish between the two affections. The tremor likewise affects at least both hands simultaneously, and does not extend progressively from one part of the body to another. The distinction between the tremor of drunkards and other shaking motions, have been mentioned by Galen, Sauvages, and others; but the disease called shaking palsy was not well characterized till Mr. Parkinson wrote his Essay, in 1817.

Such is the usual course of the disease, but in the present case there is some little

variety. The patient is 38 years of age ; he has had the disease eighteen months, has been a schoolmaster, and I believe has, at different periods of his life, indulged in drinking. It is his right upper extremity which is now affected, but although the right lower extremity does not shake, it suddenly contracts—is retracted when he attempts to walk. The disease, in this instance, began in the head and the tongue. It is by no means uncommon for it to commence in the head in general, and extend to the other parts. His head, however, does not now shake, except occasionally, and there is this curious fact in the case—that the tongue was one of the first parts affected, though that organ seldom becomes the seat of the disease until it has extended considerably over the body. The head may be observed to shake a little now, but the tremor has declined there very materially, and has gone to the arm. The affection of the tongue is very singular. When he attempts to speak, his tongue begins to vibrate like the tongue of a serpent; he makes an indistinct noise, a kind of murmuring, and then suddenly brings out his words with great rapidity ; and having once commenced, he cannot stop himself, but repeats the last words of the sentence three or four times over. This is perfectly analogous, I presume, to the circumstance of a patient's running instead of walking, when the lower extremities are affected ;—they cannot influence the muscles but by a violent effort, and then indeed they cannot easily stop themselves. I have written in the case-book—"Before he can speak he makes a confused noise, a kind of murmuring—then he speaks rapidly, and slurs his words together; he repeats not the whole sentence, but the last few words several times, and these efforts make the tongue and the right arm shake violently. Such is the effort of speaking, that he cannot avoid shaking the right upper extremity. He sleeps well, his appetite is good, and in other respects, except the shaking, he appears to be in tolerable health. Sometimes, after a good night's rest, on awaking he is perfectly still, but he is not awake long before the tremulous motion commences."

The only other symptoms present are great costiveness, so that he has only about two stools a week, and when he is at all anxious he has pain of the head ;—the latter symptom is not constant, but any mental anxiety produces it to a considerable degree.

As to his history, he has not always been addicted to drinking, but at several periods of his life he has drunk very hard. He appears also to have had much mental suffering.

With regard to the nature of this disease. In many cases there is no doubt that it depends upon some organic affection. Mr. Parkinson gives a dissection where the lingual and brachial nerves had become ten-

dinous, and the medulla oblongata was very compact and very large. When you see a person gets worse, and remedies seem to make no impression upon the disease, and he grows emaciated, it is impossible not to suppose that more or less organic change has taken place in the nervous system ; especially those parts which are most connected with the muscles of volition—the medulla oblongata, the medulla spinalis, and the nerves of voluntary motion.

In many cases, however, the disease is not of this nature, for it ceases on the employment of active treatment, and is of temporary duration. In young persons, especially in females, I have seen it several times begin without any obvious cause, and cease entirely ; and in nearly all these cases there has been a high degree of costiveness. In old persons none of these circumstances are observed—only in the young, in whom, I presume, it seldom depends upon organic disease, but upon congestion, or some inflammatory state ; some state, at least, not organic—not structural.

The patient appears to have had a fall two years ago, by which his head was slightly contused. Now, although there was only a slight contusion, it is impossible to say what mischief was done. The slightest injury to the head will sometimes be productive of the most serious consequences at a subsequent period of time. It is quite surprising to observe the length of time at which, subsequent to the receipt of injuries in various parts of the body, and perhaps especially of the head, organic disease will take place. We should consider that this man has been accustomed to drink, and had suffered much mentally ; both which circumstances might have been predisposing causes ;—and it also appears that 18 months ago, he was mercurialized ; two years ago he met with the fall ; the disease has existed 18 months ;—all those circumstances may therefore have co-operated. From the circumstance of the disease having followed a fall, I confess I am less sanguine with regard to the prognosis than if that had not taken place. It is very probable that chronic inflammation, or the consequences of inflammation—thickening and change of structure of various kinds—may have commenced.

With respect to the *treatment* of the disease. If we can ascertain that there is any fulness in any part of the nervous system, or any inflammation, the treatment should consist in bleeding locally or generally, or both—in purging and mercurializing—in employing setons, issues, moxas, &c. If there be nothing of this kind—if there be no reason to suspect fulness, or inflammation—if the patient be not of a plethoric habit, and no local pain nor tenderness be felt—then such treatment is, for the most part, ineffica-

cious. I would, therefore, not have recourse to treatment of this description unless there was a plethoric habit, or evident marks of inflammation, or fulness in some part of the nervous system; or unless there had been some injury, the effect of which we should necessarily suppose to be chronic inflammation. Almost all nervous diseases, whether convulsive, spasmodic, or paralytic, may arise from, or be dependent upon, inflammation or congestion, or upon some peculiar state which we do not understand. I know of no mode of distinguishing these varieties of the disease, except what I have already pointed out. When we cannot ascertain that the disease has arisen from mechanical injury, and there is no local pain or tenderness, or fulness of the system, stimulants, tonics, electricity, the shower bath, and various remedies—the operation of which we do not understand—iron, sulphate of zinc, copper, nitrate of silver, and in short all those minerals which belong to a class of remedies, each of which do good, and has a peculiar operation on the nervous system, distinct from that of narcotics, perfectly inexplicable—often prove efficacious in this and all other convulsive, spasmodic, and paralytic diseases. The present patient appears to have been both in the St George's and Middlesex Hospitals, and from what I have learned of his previous treatment I have directed the plan which he is now undergoing. I find that, very rationally and properly, in St. George's Hospital, he had been cupped and bled frequently; that counter-irritation had been produced by means of blisters, so that a copious discharge was kept up from the back of the head and neck; and that he had been kept on low diet. The plan which it was reasonable to pursue in such a case, where the patient was in the prime of life, the habit full, and a blow had occurred—this general and local antiphlogistic treatment, which is often successful in nervous diseases, was fully pursued, but in vain. I find likewise that in the Middlesex Hospital, it having been ascertained that these means had proved unsuccessful after full trial, stimulants and tonics were administered to him—porter, good nourishment, camphor, and various stimulant remedies, and although these did not cure him, this mode of treatment was as fully justified after the former, as the former was in the first instance. As he was of full habit the treatment began with antiphlogistic means, and in failure of them recourse was had to stimulants. Among the various remedies which do good in the diversified diseases of the nervous system, I believe the most valuable, and at the same time the most safe, is *iron*. Upon the whole I have succeeded better with that than with any others, though in epilepsy it rarely does good. I have been much more successful in the treatment of St. Vitus's dance with iron than with any other internal mineral remedies,

although their efficacy cannot be doubted. It is far less nauseating and griping than copper; it does not produce the same inconveniences that arise from arsenic, nor the sickness which results from sulphate of zinc, nor does it produce that blackness of skin which is the effect of nitrate of silver, and the chance of which makes me always unwilling to employ it. Knowing, therefore, the treatment which the patient had previously undergone, and hearing from him that he was always better the more he was strengthened, I ordered him two drachms of subcarbonate of iron three times a-day, and a pint of porter at dinner. He is a superior sort of man, and very desirous of recovery, and I do not imagine that he would deceive me by telling me he was better for invigorating measures, if he were not. It is certainly necessary to remedy the state of costiveness under which he labours, but I do not suppose that purging would cure his disease, though I am perfectly aware that where there is congestion or inflammation, or an approach to it, purging frequently does cure patients with various nervous disorders. But on the whole I really have been disappointed in the use of purgatives, though I acknowledge their value in various diseases of the nervous system. If there be no reason in this case to suppose congestion or inflammation, still the bowels are costive, and that is a state to be remedied, for constipation must make the disease worse. Under these circumstances I have ordered him to take half a minim of croton oil daily, in order to keep his bowels freely open; for though purging him may do him no good, and by debilitating would probably make him worse, yet constipation will be sure to do him harm. There is another reason also why costiveness should be obviated;—the iron would be liable to accumulate in the alimentary canal. The carbonate is a bulky remedy, and if any deficiency of the alvine discharge occurs, it will of course accumulate. I usually administer it in treacle, because treacle has a tendency to keep the bowels open.

It is not very often that I have a case of this description in the hospital, but I have been successful where the disease has occurred in young persons, by bleeding, cupping, and purging. I once, however, had a case in this hospital, where, after all this treatment was gone through, just as it has been pursued in the case of F. E., I gave the man sulphate of zinc, which he took in large quantities in vain, and then I gave him iron, when his symptoms presently gave way, and he was permanently cured. I have had several cases under my care of this affection in elderly persons, where I administered iron in vain, and this I have no doubt, because organic disease existed. I cannot say whether there is organic disease in the case of this individual or not, but I am quite sure that antiphlogistic means now will be of no use;

they have been already well employed, in addition to which there is at present no sign of inflammation. Whether after a time organic disease may clearly develop itself or not, it is impossible for me to say.

Disease of the Heart.—The other case of which I shall speak is one which of course a few of you have seen, as the man was in the hospital all the summer. It has proved fatal, and I have the diseased parts now before me. It is a very interesting case of diseased heart.

The patient, whom we shall call F. S., was a young man æt. 25, and admitted into William's ward, No. 4, on the 8th of July. He had been ill three or four months, and complained of ague, which he said began on the 31st of March, two days after his arrival at a place called Figuera, which he said was a day's sail from Lisbon. He stated that he generally had a fit every day; but besides this ague, I discovered that he had severe pains in his limbs in wet weather, and that he had suffered considerably from rheumatism. Now ague and rheumatism are frequently connected, and nothing is more common than to hear a person with ague complain of violent pain in his limbs, and to find that when the ague ceases the rheumatic symptoms increase, and *vice versa*. We cannot see any connexion between the two diseases, but they frequently alternate with each other. This patient had ague and likewise rheumatism. I perceived, however, that he had swelling of the lower extremities, and that he had a degree of tenderness of the abdomen, especially at the umbilicus. It is very common when ague continues for some time for the abdominal viscera to become diseased, and for dropsy of the abdomen to take place, and anasarca. From the tenderness of the abdomen in general, more especially at the umbilicus, without disturbance of the abdominal functions, it was evident that there was more or less of inflammation of the peritoneum. Upon questioning him still more minutely, I found that he had other disease. His pulse was very full and sharp, 104; and this led me to suppose that there was disease of the heart, for the abdominal inflammatory symptoms were not sufficient to account for this state of the pulse, nor had he any great dyspnœa when still; there was but little cough, and nothing in the state of the lungs to account for it. He had, however, some dyspnœa on first lying down, and some little cough. These circumstances led me particularly to examine his heart, and I found that the action in the region of the ventricles was very strong, but particularly in the region of the left; that it was also very extensive, and that percussion gave a dead sound, to a great extent, in the cardiac region. I found that the heart beat with a bellows sound, and that that was

heard the loudest in the left half of the region. He was readily cured of the ague by sulphate of quinine, but the other symptoms led me to take blood, which was done to the extent of a pint, with a view of lessening the abdominal inflammation, and of checking this unnatural action of the heart, which from the circumstance above-mentioned, I conceived must be more or less diseased. I ordered him mercury, two grains of calomel to be taken twice a-day, and of course low diet. His symptoms were relieved, and he was so much improved that he wished to leave the hospital. But hearing this bellows-sound still going on, feeling the pulse still sharp, and the action of the left ventricle too strong, I advised him to remain, knowing well that the state indicated by such symptoms must necessarily lead to serious mischief after a time. In spite of repeatedly taking blood, and giving him diuretics, he became dropsical all over; the bellows-sound still continued, and the pulse was as full and sharp up to the day of his death as it was before.

On opening him, there was a very important disease of the heart, which I now shew you. In the first place, both the ventricles are so dilated that the organ has acquired a very considerable size, and has assumed a roundish form. You see that the heart is round, and that the apex, instead of forming an angle, as a true apex must, has become obtuse.

[The lecturer then compared the heart with a plate representing a similar diseased state of that organ, and they were found exactly to correspond.]

To shew you that both ventricles are dilated, here is the left, which is of enormous size, and the cavity of the right is also larger than usual. But the walls, notwithstanding this dilatation, are at least of the natural thickness; indeed, they are thicker than natural in the left ventricle. Now it is evident, that as the ventricles are dilated, and yet the walls have not lost any thing of their thickness, and have even gained, there must be a great addition of substance—great hypertrophy. The case is one of hypertrophy and dilatation of both ventricles, but especially of the left. This is called *eccentric hypertrophy*: if there were no hypertrophy, this dilatation would have rendered the heart thinner. We sometimes see just the reverse; the heart being thickened, loses a portion of its cavity—has it reduced by the addition of substance occurring inwards: and this is called *concentric hypertrophy*.

I told you there was a loud bellows-sound in the heart, and I now shew you a very interesting disease of the valves of the aorta. The valves of the aorta have excrescences upon them like venereal warts. Here is a most beautiful specimen of disease of the valves of the aorta, which fully ac-

counts for the bellows sound which we heard. I have no recollection of ever having seen excrescences of such a length—one is nearly an inch and a half long. Now these excrescences did not produce much impediment to the circulation; you see they are quite soft, and they would lie flat; consequently they would not be very much in the way of the circulation of the blood, and the fullness of the pulse proved that they were not. Yet although they were not such an impediment as to render the pulse small, they were sufficient to create a bellows-sound. The inconvenience the man must have suffered from the great hypertrophy of the heart, and the violent impulse with which the blood was consequently driven to all parts of the body, must have been very great. His pulse shewed the impulse of the heart, and these excrescences produced an impediment only sufficient to be detected by the ear.

In the work I now shew you there are plates of excrescences. In one of these cases there were no symptoms induced, and the man came to the hospital for some other complaint, and died of it without having stated that he suffered at all in the chest. On inspecting the body we were surprised to find these excrescences; but I have no doubt, that had there been any reason for listening to his heart, I should have discovered the bellows-sound. This patient, whose heart is before me, had so full and sharp a pulse that I was of course led to make inquiry respecting the state of the heart. I listened, and found, not only symptoms of hypertrophy, but symptoms of impediment to the blood—a strong bellows-sound. I have no doubt that a very minute impediment, not sufficiently sensible to disturb the circulation, is yet sufficient to produce the bellows-sound. On striking over the region of the heart with the hand, there was a dull sound to a great extent, so that I did not doubt that there was a dilatation of the heart, and perhaps hydropicardium. I was sure, from the fullness and sharpness of the pulse, that there was great hypertrophy. I attributed the dead sound to dilatation; as the greatest hypertrophy is where dilatation also exists, and there was both a great violence and a great extent in the heart's impulse. On opening the pericardium there was a quantity of clear serum found, perhaps nearly half a pint, but this could not have caused the symptoms. The heart was so large that it alone enormously distended the pericardium. There were likewise some flakes of lymph in the serum. I think it most likely that there having been rheumatism, pericarditis was originally set up, and at length chronic inflammation of the substance and of the internal membrane at the aortic valves. I believe, in the great number of instances, that hyper-

trophy is an inflammatory affection, and that hypertrophy, and most affections of the heart, very frequently begin with pericarditis in some degree or other.

EDINBURGH INFIRMARY.

Cases of Amaurosis treated by Strychnine, under the care of Dr. Shortt.*

CASE I.—Peter Hamilton, æt. 22, an iron-founder, admitted 16th June 1829, can only distinguish light from darkness. Both pupils are much dilated, the right more than the left. The iris in both is sensible to the stimulus of light. The eyes are clear, and, with the exception of a slight squint, present a natural appearance. This state of vision has continued two years. His account of its commencement is as follows.

Having been for some years daily working under exposure to the heat and light of an iron-founder's furnace, he became affected with indistinctness of vision, accompanied with flashes of light when looking at minute objects, or when stooping. This indistinctness became gradually more and more obscure for fifteen months. At the end of this time he could only distinguish light from darkness, and has remained in that state nine months. His general health had all along been quite good.

17th.—The temples were shaved and blistered, and one-eighth of a grain of strychnine dusted the following day on each side.

23d June (6th day).—Within the last week a blister has been twice in succession applied to each temple, and to the raw surfaces, first one-eighth, then one-fourth, and to-day half a grain of the powder of strychnine. The pupils are less dilated, and the iris readily contractile; strabismus almost gone; tongue rather foul; bowels open.

25th.—Can to-day distinguish colours pretty readily, especially with the left eye, the iris of which is less sensible than that of the right. Half a grain was applied to each temple.

26th.—Still continues to improve, and can distinguish yellow and red colours; some head-ache, and tongue much loaded and white. Three-fourths of a grain to each surface; a cathartic mixture.

27th.—Less head-ache; sight considerably improved, for he can distinguish print from writing. One grain applied to each surface.

28th.—Vision more distinct. Had an additional grain and a quarter yesterday. Had $1\frac{1}{2}$ on each surface.

July 2d (15th day).—Had $1\frac{1}{2}$ grains on the 30th. On the 1st an attack of rigors, debility, sickness, vertigo, and head-ache; which are now gone, but feels weak. Can

* Edinburgh Medical and Surgical Journal.

now clearly distinguish objects placed at the distance of some paces, and reads easily the hour upon a watch by evening twilight; iris of both eyes quite sensible. Intermit strychnine.

4th.—Sight still further improved. Renew the blisters, and one-fourth grain of the powder.

13th.—Can now distinguish objects clearly at considerable distances. Pupils continue more contracted, although less than naturally. Strychnia from one-fourth to three-fourths of a grain has been applied as before.

26th.—Strychnia has not been applied since last report, from a sensation of violent heat over the skin.

August 4th.—Since the last report, two grains have been applied to each temple, without any obvious effect; but improvement in vision continues.

16th.—Has had two grains on each temple for eight days. Repeat blisters, and apply $2\frac{1}{2}$ grains to each surface.

September 8th (79th day).—Since the last report he has been applying the strychnia every day, from 2 to $3\frac{1}{2}$ grains on each temple, without any constitutional effect, but with continued improvement in his sight.

There were some days of intermission, when the blisters were obliged to be renewed. Yesterday he left the Infirmary, and attempted to work; but finding that the act of stooping occasioned dimness of sight, he returned the next day and resumed the strychnine, to the extent of three grains on each temple, and continued gr. ijss. to the 13th. It was then omitted, and on the 31st, when he could see perfectly, he was ordered to apply the vapour of ammonia for a few days. The eyes appeared quite natural, the squinting gone, and he was enabled to tell the time upon the Tron Church clock from the Infirmary windows, at the distance of 300 yards.

CASE II.—Andrew Drummond, æt. 34, a ship-carpenter, admitted October 2, 1829. This patient can only distinguish light from darkness—a window from the wall. The pupils of both eyes are rather contracted, and there is but little sensibility of the iris. In the left eye there is a ring of opaque substance, the remains of a cataract, the centre of which was removed by an operation; but although the light was thereby admitted, he was still unable to see. This ring can only be observed when the pupil is dilated. This state of vision, which, with little change, has continued six years, commenced as follows.

He had been employed as a flax-dresser six months before he was attacked with fever at Dundee. This was about six years ago. But some weeks previous to this attack, dimness of sight had gradually come on; and then, during the delirium of fever,

his sight was totally lost, and likewise his hearing. During his convalescence he regained his hearing, but remained nearly quite blind; sometimes, however, distinguishing light from darkness. A year after this he was admitted into the Infirmary, had the centre of the cataract removed from the left eye, was blistered, and had setons both in the nucha and in the inside of the arms. But he left the hospital without receiving any benefit to his sight. Two years ago he returned to the house, underwent medical treatment, took mercury, renewed his blisters and setons, and left the house again without any distinct improvement, but only thinks he saw a little more clearly. He has, since his fever, enjoyed good general health.

Oct. 3d.—A blister having been applied to the right temple, yesterday one-fourth of a grain of strychnia was dusted upon the raw surface; and states that he saw a little with the right eye about six hours after the application, and that almost immediately after he felt a shooting pain across his forehead, but no other sensation. One grain to be applied.

5th.—Says he did not feel the application of the whole grain so much as the first quarter, but thinks his sight still improved. Full diet. Blisters renewed.

7th (5th day).—One grain since last report. Can now distinguish large from small letters; some vertigo last night. $1\frac{1}{4}$ grain, and aqua ammoniac.

10th.—Since last report a fresh blister and three grains have been applied as before. Sees the Tron Church steeple from the window, and distinguishes the colours of the ward, which he could not do yesterday. One grain as before, and a cathartic mixture.

13th.—Since the 8th, $2\frac{1}{2}$ grains have been applied. Noticed yesterday, with his left eye, the bars of the window. Two blisters since applied have risen well. Strychnia omitted yesterday, and no further improvement in sight. Apply $1\frac{1}{2}$ grains.

18th.—Five grains since the 13th, and a renewal of the blisters. Complaints of the light affecting his eyes, which he had not experienced before.

22d.—Three grains since the 18th, with alternate blisters on each temple. Can today see men walking at a distance, which he could not do yesterday.

Nov. 7th.—Since the 22d, $19\frac{1}{2}$ grains have been applied, at most $2\frac{1}{2}$ grains at once. His sight gradually improving, and the intolerance of light removed entirely. Strychnia has been intermitted, and his appetite improved by the tincture of calumba. He can now see (Nov. 11th) to read the hour upon a common watch—but he cannot yet distinguish small print.

He continued in hospital till about the end of November, during which time his sight was still further improved.

CASE III.—George Miller, æt. 52, a mason, was admitted on the 4th July 1829, labouring under amaurosis.

The vision of both eyes was very considerably impaired, but especially that of the left, with which he can but faintly distinguish the colour and shape of conspicuous objects when placed near him. Its pupil was slightly oblong, in a transverse direction, and always remained more dilated than that of the right eye, with the motions of which pupil it seemed chiefly to sympathise, contracting pretty readily upon the simultaneous admission of a strong light into both, whilst, when equally exposed alone, it contracted very tardily and imperfectly. Behind it the faintest degree of haze was perceptible. The right eye presents a perfectly natural appearance. Both eyes became affected with indistinctness of vision between four and five months ago, and some weeks after their having been cured of a pretty severe attack of inflammation, which had commenced towards the end of last year, in consequence, he thinks, of some lime floating in the air having entered them. He has used mercury internally, and applied repeated blisters, without any benefit to the present affection. The general health is good.

Both temples were blistered in the evening, and $\frac{1}{2}$ of a grain of strychnine sprinkled over each surface the following morning, and repeated for several days without apparent effect. The first blisters having healed, and a second pair being applied to each temple, one grain of strychnine was sprinkled on each the following day. This was followed by giddiness and tremors, which continued for two days, during which the strychnine was intermitted, and the second blisters healed. No apparent change. The blisters were therefore renewed, and only a quarter of a grain of strychnine applied to each surface. The following day (14th July), being the ninth day since the strychnine was used, the sight of the left eye was found to be so far improved that the patient could distinguish the hospital bedding which was exposed to the air on the ground behind the Infirmary. In a few days the pupil of the same eye became more active, and the improvement in sight advanced. The strychnine and blisters were continued as usual, but no further change took place till the 4th of August, when he said he could discern objects at a considerable distance with the left eye, the pupil of which continues dilated to the same degree as formerly. The same treatment was pursued till the 23d of August, when he considered his vision still further amended; on the 4th of September again stated that improvement has taken place; also on the 6th, when he was able to distinguish objects at the distance of a quarter of a mile. Discharged. This patient used about eighty grains of strychnine. The greatest quantity

applied at any one time amounted to $5\frac{3}{4}$ grains.

CASE IV.—William Smith, a labourer, æt. 31, was admitted into the Royal Infirmary on the 13th October. Could only distinguish light from darkness; pupils not dilated, and the iris, which is grey, was slightly sensible of light in both eyes. Over the left cornea there was extensive opacity, and sees more light in consequence with the right eye. General health good. Stated that twelve years ago, while going to his work, he perceived one morning a dimness of sight, as if there was smoke before him. In the course of three days from this he became totally blind, and, notwithstanding active blistering, continued so. About a year after he regained his sight partially, so as to enable him to reap during part of the harvest, but he was always obliged to be led home at night; since which time he has been in the state above described, and has used no remedies whatever.

He was blistered, and the strychnine was used the following day, which produced, as in many of the other cases, a very bitter taste in the mouth after application. He had some pain in the balls of the eyes also, but no improvement in sight. On the following day, however, slight amendment took place in the left eye, but he suffered during the night from head-ache. The treatment was continued, and on the 22d of October the head-ache was again severe, with pricking pains in the arms and legs; but the sight had so far improved that he was able, for the first time, to distinguish the bars of the windows. The sensations continued, and on the 26th the vision of the right eye was improved. On the following day improvement took place; the forehead swelled, and the pricking pains extended to the finger-ends, when the strychnine was omitted. On the 30th of October the opacity of the left cornea was considerably diminished both in extent and deepness. On the 1st of November he was able to distinguish a book, and said his sight was stronger. Had leave on the 4th of November to go out for a few hours; was able to distinguish men from women, and in walking along was able to avoid coming in contact with people on the street, which he could now traverse without inconvenience. On the 10th of November began to see downwards, and could distinguish any thing on the table; was slightly improved beyond this, when he was discharged by desire.

NOTICE.

We have received several letters on the subject of the trial of Capt. Moir: our Correspondents must really excuse us—we cannot insert them.

W. WILSON, Printer, 57, Skinner-Street, London.

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SATURDAY, OCTOBER 23, 1830.

LECTURES
ON
COMPARATIVE ANATOMY,
AS ILLUSTRATIVE OF
GENERAL AND HUMAN PHYSIOLOGY,

*Delivered in the Medical School of
Birmingham,*

By S. LANGSTON PARKER.

LECTURE II.

*The Origin and Development of the Brain in
the Fetus, illustrated by the Disposition of
this Organ in the Four Classes of Vertebrate
Animals.*

GENTLEMEN,—Having, in our preceding lecture, generally described the organic system of nerves, their development, connexion, organization, and functions, we proceed to examine more minutely the origin and development of the animal nervous centres—the brain and spinal cord, with their nerves and appendages.

Tiedemann* has declared, that there are only two methods of study which can ever lead us to a thorough and perfect knowledge of the structure and functions of the brain: these are, an examination of its gradual increasing complexity in animals, and in the fetus at the various periods of utero-gestation. We shall, in this lecture, consider its disposition in vertebrate animals, proceeding from the lowest to the highest classes, and likewise notice the analogies existing between these, and the progressive formations of the brain of the human fetus, and it will be seen that the brain of man traverses during utero-gestation the various permanent states of the same organ in animals.

For instance, the brain of the human em-

bryo at first bears strict resemblance to that of certain pisces, the lowest class of vertebrate animals: it then puts on the disposition of the brain of reptiles, subsequently that of birds, the lower and higher mammalia, and, lastly, its own peculiar type. It commences with the most simple state of the formation of this organ, and proceeds gradually to the most complex. There is no part of the economy of animals reduced to such an unity of composition as the brain,—none in which the gradation of development, from the most simple to the most complex, is so evident and perfect. Its origin and progress are the same in all animals, and in describing the manner in which its formation is effected, we shall find that the study of its organization in animals will unravel and render simple the complex disposition of the part in man.

During the first month of gestation of the human embryo no vestige of the spinal cord or brain is apparent; a membranous tube occupies the place of these organs, filled with a limpid fluid, and dilated into a round vesicle, which subsequently forms the envelops of the brain. It is not easy to procure the human fetus at this period, but this origin, or first appearance of the brain and spinal cord, may be illustrated by the formation of the part in the embryos of mammalia and birds. Haller, Malpighi, Wolf, and Harvey, have signalized this primitive disposition of the brain, and to theirs I may add my own testimony, having carefully noticed it in the incubated germ, and in the fetus of certain mammalia; the disposition of the organ in the incubated germ on the second day being precisely similar to that of the human fetus of the first month. In all animals the spinal cord makes its appearance before the brain, the latter organ being first apparent in six small vesicles, the parietes of which are formed by a thin shell of medullary matter, and the interior containing a colourless fluid. These vesicles are the elements of the brain in all the classes of vertebrate animals, the two anterior of which subsequently form the

* Anatomie du Cerveau, par Jourdain, Paris, 1823, p. 2.

cerebral hemispheres; the two central, which are the most voluminous, the tubercula quadrigemina, optic tubercles, or lobes; and the two posterior, the medulla oblongata; which parts, whatever others may be wanting, are always met with in the mammalia, aves, reptilia, and pisces.

The brain of fish, though in appearance presenting great diversity, is the most simple of all the vertebrate tribes, scarcely possessing any other parts than those we have enumerated as forming the elements of the cephalic mass. This organ goes progressively increasing in complexity, by the addition of new parts, from fish to reptiles, from the latter to birds, the mammalia, and man. It should be observed, however, that the elements of the brain are always placed on the circumference of the organ, whilst the addition of new parts is always made towards the centre; the cerebral hemispheres, the cerebellum, and medulla oblongata, occupying the peripheric portion, being found in all the classes, whilst the pons varolii and corpus callosum, forming the central parts of the brain, are only added in the mammalia.

The elements of the brain are, as it were, balanced in the four classes of vertebrata, one remaining in a rudimentary condition, whilst another is carried to its maximum of development, or the highest point of organization of which it is susceptible; thus constituting the peculiar feature of the class to which it belongs, the predominating part varying in each class—being the optic lobes in fish, and the cerebral lobes or hemispheres in man and the mammalia. If we examine the various parts composing the brain in the series of vertebrata, proceeding from the most simple to the most complex, we shall find the organ, as we have said, reduced to an uniformity of composition in all. The brain of fish is at the lowest point of organization; and is, under this point of view, the embryo of the permanent state of this organ in the higher classes. The brain in the osseous fishes, from which we choose as examples the perch, the pike, and the whiting, is composed of a transverse layer of medullary matter, covering the fourth ventricle, which is the rudiment of the cerebellum, and four lobes placed anteriorly, the most posterior of which are the elements of the tubercula quadrigemina, to which we here give the name of optic lobes, whilst the former represent the primitive or fetal disposition of the cerebral hemispheres of the reptilia, aves, and mammalia. Thus we have the brain of fish composed of three elements,—the cerebellum, the optic lobes, and the hemispheres of the cerebrum: two of these elements remain in a rudimentary state, the former, the *cerebrum*, being at a minimum, whilst the latter, the *cerebellum*, is at a medium point of development. The optic lobes

are here carried to their maximum of organization, and become the predominating portion and peculiar feature of the organization of the brain in fish. In the interior of the brain we find a ventricle and striated tubercles, which are not met with in any other class. If we examine the unity of composition of the brain in all the classes, considering the brain of fish as the embryo of the permanent state of this organ in the reptiles, birds, and mammalia, and carry our observations to the development of the optic lobes in these orders, we shall find that in all, during the first third of the period of gestation or incubation, the optic lobes are the predominating parts of the brain; they are enormously developed, whilst all the other parts are in a state of atrophy. This is the state of the brain of the tadpole of the twentieth day, of the embryo of birds about the fifth or sixth day of incubation, of the human fœtus of the sixth week, and in all the other orders of mammalia, without exception, during the first third or first fourth of the period of utero gestation.

The optic lobes of fish are hollow, as we have said, containing parts not met with in any other class. In reptiles they are likewise hollow, without contained parts. In birds and quadrupeds the cavity is gradually obliterated from the successive deposition of laminae of cineritious substance. In the fœtus of mammalia they are primitively hollow vesicles, gradually undergoing obliteration from depositions of grey substance as they approach the period of birth.

In fish these parts occupy the superior, central, and nearly the whole of the cephalic mass.

In reptiles they become diminished in importance, from the increased development of other parts, as the cerebral hemispheres.

In birds they are completely covered by the prolongation of the cerebral hemispheres backwards, though they are still perceptible on the lateral parts of the brain.

In quadrupeds they are completely concealed by the still greater increase of the posterior lobes of the cerebrum. We shall find, by examining these organs in a higher animal, that they, in their progress toward perfection, successively repeat the permanent form and disposition of the same parts in the series of animals below them. The optic lobes of the fœtus of the mammalia, at the commencement of gestation, predominate over all the other parts of the brain, and possess an internal cavity—thus representing the permanent state of the lobes in fish.

Toward the middle of gestation they are not so conspicuous, from the increase of other organs, as the cerebellum and cerebral hemispheres: such is the permanent state of the brain of reptiles. At a still more advanced period they become partially concealed, from the greater development of the he-

mispheres, and thus represent the permanent state of these parts in birds.

This observation is not only applicable to the various parts of the brain, but to almost all the other organs of the animal economy, especially those composing the vegetative sphere, among which the glandular and circulating organs are eminently conspicuous; we shall frequently have to recur to illustrations of this extensive and interesting law.

If we now consider the disposition of the optic lobes or tubercula quadrigemina of the human fœtus, we shall find that this part of the brain has commenced its organization in a state precisely analogous to that of fish, and that it passes, in its progressive development, through all the grades allotted to the permanent state of this organ in the reptilia, aves, and mammalia. In the fœtus of the second month, the tubercula quadrigemina are two isolated lobes or laminae of medullary matter, lying uncovered over the fourth ventricle, and forming the two largest lobes or ganglia contributing to the organization of the brain. They are not united, and in their interior is found a large ventricle, which communicates with the aqueduct of Sylvius, or the "*iter à tertio ad quartum ventriculum.*" It will be recollected that this was their disposition in the class "*pisces*," in which they form the largest divisions of the brain, are disunited, and have a ventricle or cavity in their interior. In the succeeding weeks of gestation, the optic tubercles are a little less conspicuous, from the increase of the pair of lobes placed immediately before them, which are the cerebral hemispheres; and the ventricle in their interior is less, from additional deposits of grey matter. The organ has now ascended a step higher in its organization, and is analogous to the disposition of the optic lobes or tubercles of the reptilia.

At the fifth month it is only the posterior parts of the corpora quadrigemina that remain uncovered, the anterior portion being concealed by the prolongation backwards of the cerebral hemispheres. They are now united by a thin lamina of medullary matter, and the ventricle is smaller than in the reptilia, from the increase of medullary and cineritious substance. All these characters are precisely those of the permanent state of the part in birds. No appearance of the nates and testes are yet apparent—the external surface of the lobes is quite smooth, without any subdivision of their surface into the smaller eminences which give them the appellation of tubercula quadrigemina. The cavity in the interior of the lobes in birds communicates with the aqueduct of Sylvius, as in the fœtus. They are large, smooth, and round bodies, in birds, as in the fœtus, are covered in the same degree by the hemispheres, and are the principal roots or ganglia of the optic nerves.

The tubercula quadrigemina of the adult bird are analogous or resemble those parts of the brain of the human fœtus of the fifth or sixth month, in the following particulars;—In both they bear the same relation to the other parts of the brain; in both there is a cavity or ventricle in their interior communicating with the aqueduct of Sylvius; in both the lobes are connected by a thin slip of medullary matter; in both the optic nerves derive their chief attachment and origin from this part; and both are composed of cortical and medullary substance.

In all the mammalia the optic tubercles have the same structure as in man—*i. e.* they are medullary in their interior, with an external lamina or shell of cineritious or grey substance; the medullary matter being formed by the fibres arising from the corpora olivaria.

The general mass of the lobes encloses small cavities, which are larger in the younger than in the adult mammalia, and should therefore be considered as the remains of the large cavity existing in the fœtus. The tubercles are completely covered by the hemispheres in the higher mammalia, as the quadrumana and ruminantia; in the lower, as the chiroptera and digitata. They are perceptible between the cerebrum and cerebellum, as in the human fœtus of the seventh month. The size of the tubercles is the more considerable in proportion to the whole brain, as this organ is in itself more simple. It is in man and the quadrumana that the tubercula quadrigemina have the smallest relative proportion to the whole brain, because in them the organ is most complicated and perfect. It is in the lower mammalia, on the contrary, as the bats and beaver, that they have the greatest relative proportion. It is precisely similar with regard to the human fœtus—*i. e.* the optic tubercles or lobes are larger in proportion to the whole brain as the fœtus is younger; at that period it resembles the lower vertebrata, and the lobes become smaller in their relative proportion to the whole mass as the fœtus approaches the period of birth. They then bear the same relation to the whole brain as the optic tubercles of the higher mammalia.

Thus we see that, having placed before us the brains of a fish, a reptile, a bird, and a quadruped, we have represented in the most perfect manner the phases through which this organ passes before attaining its own peculiar character.

We shall illustrate this subject farther by examining the origin and development of the cerebral hemispheres and cerebellum.

The second element of the brain, invariably met with in all vertebrate animals, are the double vesicles at the anterior part of the cranium, which ultimately form the cerebral hemispheres, of which they are the primary

rudiments. The cerebral lobes in the osseous fishes are at the simplest point of organization of which these parts are susceptible in the series of vertebrate animals, being composed merely of two solid, round, and isolated masses, placed immediately before the optic lobes, which surpass them about one-third in size; this proportion, however, varying in the different classes.

The brain of reptiles acquires a more complex organization than that of fish, the cerebral hemispheres predominating in size over its other parts; the fundamental character of the organ in this class being that the cerebral lobes, in their permanent state, surpass the development of the optic. We have said that the cerebral lobes of fish were solid round bodies; in reptiles the first rudiment of a ventricle is perceptible in the permanent state, containing the simplest forms of the "corpora striata" and "optic thalami," the posterior part of the latter being uncovered by the ventricle, on account of the rudimentary condition in which the lobes are met with in this class. In all reptiles the external surface of the hemispheres is smooth, no vestige of circunvolutions or sulci being yet apparent; the hemispheres are united posteriorly to the optic lobes, which parts appear to arrest the prolongation of these organs backwards.

The commencement of the organization of the cerebral lobes in birds and mammalia is in the double vesicle we have alluded to, situated immediately before the optic lobes, which they do not equal in size, and which disposition they respectively assume in the chick of the fifth day, and the human fœtus of the fifth week. On the tenth day of incubation, from the progressive increase of the cerebral lobes in a proportion greater than that of the optic, the former have acquired an increased development, and their disposition is now analogous to the permanent state of the hemispheres of the adult reptile. During the latter periods of incubation the cerebral lobes gradually assume the more complex form which distinguishes their organization in the class to which they belong: all the internal parts assume a more perfect disposition; the corpora striata and optic thalami are better developed; the fornix, with the anterior and posterior commissures, are added, which did not exist in the class of the reptilia.

The cerebral lobes, which form the principal part of the brain in the mammalia, are at their maximum of development in the higher orders of this class. Like the origin of these parts in all the vertebrata, the organization of the cerebral lobes in the mammalia are first apparent in the two hollow vesicles situated at the anterior part of the head. These vesicles pass through the grades allotted to the permanent state of the three classes in which we have considered them,

precisely in the same manner as the reptilia and birds, in a longer or shorter period, according to the period of gestation in the orders to which they belong. The rudiments of the cerebral hemispheres, as we have seen them in their permanent condition in the reptilia, do not prolong themselves farther backward than merely to come in contact with the anterior border of the optic lobes; in birds, they cover the superior, though not the lateral parts of these lobes. The mammalia and man are remarkable for the development of the posterior lobe of the cerebrum, which does not exist in any of the inferior classes; and in the former is carried to such an extent, as not only to cover the corpora quadrigemina, but also the cerebellum to a greater or less extent; this development of the posterior lobe progressively increasing from the chiroptera to the digitata, glires, catæcea, quadrumana, and man. The cerebral lobes of these orders are provided with parts both internal and external, which are not found in the three inferior classes of the pisces, reptilia, or birds. The external parts are the posterior lobe of the cerebrum (which we have mentioned), the sphenoidal lobe (which is the eminence formed by the anterior extremity of the middle lobe in the sphenoidal fossa), and what is termed by Serres the "lobulus hippocampi"—a lobule of medullary substance, met with only in the lower mammalia, and connected with the external root of the olfactory nerve, to which it may probably furnish an accession or increase of vital energy. The lobulus hippocampi is developed in direct ratio with those parts of the brain which are more particularly the property of animals who depend for their existence upon the perfection of their special senses, especially those of sight, smell, and hearing, which are possessed by most animals in a degree proportionally more elevated than in man. This lobe is in direct proportion with the volume of the spinal cord, the middle lobe of the cerebellum (or superior and inferior vermiciform processes), the nerves of the senses we have mentioned as the first, second, and portio mollis of the seventh pair, and the tubercula quadrigemina or optic lobes; these parts being carried to a greater extent of development as we descend the animal series, whilst they are atrophied as we ascend from the lower orders to the cetacea, quadrumana, and man.

The sphenoidal lobe is more essentially the character of the most perfect organization to which the cerebral lobes are carried, being found at its maximum of development in man, and the animals more nearly resembling him. This lobe is formed in an inverse ratio with regard to the lobulus hippocampi, and the parts which are in direct relation to it. The cerebral hemispheres, the transverse or lateral lobes of the cerebellum, and the pons varolii, are in direct proportion to the

volume of the sphenoidal lobe, which parts exist in their most perfectly organized state in the brain of man, and are atrophied as we descend the scale, in the same proportion that the lobulus hippocampi, and its dependent parts, are diminished as we ascend. The decrease of the sphenoidal lobe takes place gradually from man to the simiæ, cetacea, gleres, and chiroptera; the increase of the lobulus hippocampi is in the same relation in descending the animal scale, whilst the development and decrease of the separate lobes are in the same inverse ratio as we ascend.

I should have mentioned the existence of a third lobe, which is an appendage to the cerebral, and exists in all the four classes of vertebrate animals. This lobe is the olfactory, situated at the anterior extremity of the cerebral hemispheres, and, like them, double and symmetrical, terminating the superior portion of the cerebro-spinal axis superiorly, as the *canda equina* does inferiorly. This lobe is connected in its development with the progressive perfection of those propensities and functions which are peculiarly the property of the animal, and stand in direct opposition to the moral or rational acts of animals, if so they can be termed. In proportion as the face and organs of the special senses predominate over the volume of the head and brain; or in proportion as the facial angle of Camper becomes more acute, which it does in all animals descending from the simiæ to the digitigrada, plantigrada, ruminantia, glires, chiroptera, and insectivora; from the higher to the lower mammalia; to birds, reptiles, and fishes; so this lobe, which is immediately connected with the olfactory sense, is increased in size. In fish it occasionally surpasses the volume of the cerebral lobes themselves; in reptiles its predominance is not so much marked; in birds it is still more indistinct; and in the higher mammalia, and man, it is quite rudimentary. Such are externally the characters of the cerebral lobes. In the mammalia we find three great lobes, into which the hemisphere of the adult animal is divided; and three smaller ones, or as they may be termed, cerebral appendages—the sphenoidal lobe, the lobulus hippocampi, and the olfactory lobe. In the complex organs of the mammalia we have then six lobes, or three lobes and three appendages; in birds the number is reduced to two; in reptiles the lobe is pyramidal and single; and in the pisces it is reduced to a globular solid body, inferior in volume to all the other parts of the brain.

In the human fœtus of the second month we may perceive, at the anterior part of the membranous cavity, which is subsequently to become the cranium, two small round vesicles, which are the primitive rudiments of the cerebral hemispheres; the small size

of these vesicles leaves the tubercular quadrigemina naked on the surface of the brain. During the third and fourth months of gestation the hemispheres prolong themselves backwards so as to touch the anterior borders of the optic lobes or tubercles; their superior face is smooth, but occasionally marked with slight depressions, into which the pia mater dips. They are, at this period, two membranous or medullary sacs, into which the pia enters by the name of choroid plexus over the tubercula quadrigemina. At the fifth month they prolong themselves still farther backwards; and during the seventh, eighth, and ninth months, they extend so far posteriorly as not only to cover the tubercula quadrigemina, but also the greater part of the cerebellum; the circumvolutions also, and the sulci, become more and more apparent. From this disposition it is evident that the hemispheres of the brain are formed from before backwards, being first a mere membranous vesicle, gradually augmenting in complexity of structure as they are extended posteriorly over the optic tubercles and cerebellum. The same mode of formation takes place in animals, but the organ is arrested in its various degrees of perfection at that step which is to constitute the peculiarity of the class to which it belongs. The cerebrum of the pisces, generally speaking, is composed of two solid medullary lobes, situated immediately before the tubercula quadrigemina, which organs they do not equal in size. The primitive disposition of the human fetal brain is exactly similar to the permanent state of fish, both being two round tubercles, or vesicles, of medullary matter, placed immediately in front of the optic tubercles.

In the reptilia the first pair of lobes from which the olfactory nerves arise, are the hemispheres of the cerebrum. They are strictly analogous in their disposition to those organs in the fetal brain of the third month. They are in this class hollow vesicles, containing a choroid plexus and lobes, or ganglia of medullary matter, termed optic thalami; they predominate in size over the tubercula quadrigemina, the permanent state of the hemispheres of the reptilia representing the evanescent or transitory one of these parts in the human fœtus of the third month.

The cerebral lobes of birds are still more perfectly developed than those of the reptilia; they approach, touch, and partially conceal, the optic tubercles; no vestige of sulci, or circumvolutions, are perceptible, their surface being quite smooth, and not subdivided into minor lobes. Here again we have the brain of the fœtus of the fourth and fifth months, in whom the structure and disposition are precisely similar. The cerebral hemispheres of the mammalia approach gradually to those of man, passing through several degrees of increasing complexity of organ-

nization, which establish the resemblances between it and the human fœtus. The cerebral hemispheres of the rodentia, the rat, the mouse, &c. are inferior to the structure of these parts in the remaining orders of the mammalia, their external surface being smooth, as that of birds; but in ascending through the families of this class to the quadrumana and cetacea, the circumvolutions and sulci, with the backward prolongation of the hemispheres, become more and more developed. On the posterior part of the cerebral lobes of the quadrumana the sulci and circumvolutions are least apparent. It is on this part, also, that these are least perceptible on the brain of the human fœtus.

The development of the cerebral hemispheres in man and the higher mammalia is owing to the greater expansion of the fibres of the corpora pyramidalia, upon which parts, according to the researches of Reil, Tiedemann, and Gall, the whole organization of the cerebral lobes is dependant. The fibres from these bodies in reptilia and the human fœtus of the second month, pass forwards into the optic thalamus, where they receive an accession of formative impulse, from deposits of grey matter, not fibrous, but extremely vascular; the fibres thus reinforced pass outwards and forwards into the corpora striata, where they are likewise reinforced by additional deposits of grey substance. Emerging from the anterior and lateral borders of these corpora the medullary fibres expand in all directions into the medullo-membranous vesicle, forming the parietes and substance of the cerebral hemispheres, at which point they represent the hemispheres of the fœtus of the third or fourth month, and the permanent state of these parts in the reptilia and aves; in the latter class the expansion having proceeded so as to produce a cerebrum of greater volume, and consequently one representing a higher class than that of the reptilia. The lateral fibres of the hemispheres, towards the middle of gestation, proceed inwards, to meet those of the opposite side, and to form the corpus callosum, or great commissure of the cerebrum. It is the anterior extremity of this body which is first formed in the human fœtus, and which part is alone met with in the lower mammalia, as the rodentia and chiroptera, from the small extent of the cerebral hemispheres in these orders. As the hemispheres extend backwards in the fœtus and the higher mammalia, from the still increasing expansion of the fibres of the corpora striata, the corpus callosum acquires a more marked extent, and subsequently assumes the highest point of development in the human subject, where also the expansion of the fibres of the hemispheres is most complete, and the circumvolutions and sulci most numerous and profound.

The third and last element composing the aggregate of the brain is the cerebellum, situated on the upper part of the medulla oblongata, and covering the cavity of the fourth ventricle. We have seen, in considering the fetal and permanent states of the optic and cerebral lobes in the four classes, that the former, or tubercular quadrigemina, were at their minimum of organization in man, consisting of two solid lobes of medullary and cineritious matter, which became more complicated as we descended the animal scale, and arrived at their maximum of development in the pisces, where we found them to contain a ventricle, with striated tubercles. The cerebral lobes were directly opposed in their march of development to the optic; in fish we found them small, solid lobules of medullary substance, as the tubercula quadrigemina in man; whilst in the latter they contained ventricles with striated and medullary bodies, like the cavities of the optic lobes in fish. In the consideration of these two lobes, then, man occupies the rudimentary extremity of the scale with regard to the optic lobes, and fish the same position in reference to the cerebral. The simplest elements of the cerebellum are found in a third class, the reptilia, in whom this organ is reduced to its most rudimentary point of organization.

In the embryo of birds no vestige of the cerebellum is apparent till the sixth or seventh day of incubation, being towards the end of the first third of the duration of the whole period of the process. In the embryo of reptiles it is not perceptible till the twenty-eighth day; and in the calf, the horse, and the human subject, till the middle of the second, or the commencement of the third month. This tardy appearance of the cerebellum in the economy is a curious fact, which will occupy our attention when speaking of the individual comparative anatomy of the organ.

The cerebellum, when first apparent, consists of two transverse medullary laminae, attached by their outer borders to the medulla oblongata, whilst the inner are free and floating over the superior part of the cavity of the fourth ventricle. At a subsequent period these laminae are united on the median line, and the organ then assumes, in its single and simplest state, the rudiment of the middle lobe or vermiform process of man. In the fetal state of the higher mammalia, the development of the cerebellum is continued by the appearance of the lateral lobes and their junction with the middle; these parts progressively increasing, from the lower mammalia to man, where they are perfect.

The permanent state of the cerebellum in many of the reptilia, as the "*anguis fragilis*," or blind worm, the "*lacerta agilis*," or green lizard, and the various species of

frogs, is the fetal state of the higher animals, consisting of a double transverse medullary layer, united by a suture on the median line, and covering the upper part of the fourth ventricle, the inferior part of which remains permanently open; this being the simplest state in which the organ is met with. In the higher reptilia, as the testudines, the organ has advanced a step in its organization, and is a little more developed. In the osseous fishes we find it a degree more perfect than in the reptilia. Here it consists of a triangular medullary body, concealing, more or less, the fourth ventricle, and resembling the fetal state of the higher animals, when the lateral laminae first become united on the median line.

In the cartilaginous fishes, as the white shark (*squalus carcharias*), the cerebellum covers the two superior thirds of the fourth ventricle, and the transverse fissures and striæ which exist on the surface of the vermiform process of the mammalia, are first evident. The organ assumes more and more the character of the middle lobe of the higher animals, and is little inferior to its development in the succeeding class.

The cerebellum of birds entirely conceals the cavity of the ventricle, and commences the rudiments of the transverse development so predominant in the higher orders; the increase in volume of the fore-part of the organ is carried to a much greater extent than in the preceding classes, so that it comes in contact with the cerebral lobes; between which organs the optic are, however, yet apparent. In arriving at this point of its organization, the cerebellum has repeated, in this class, the permanent state of the part in the reptilia and pisces, both osseous and cartilaginous, commencing with the two lateral medullary laminae, as in the lowest reptiles; subsequently uniting on the median line, as in the osseous fishes; extending so as to cover the fourth ventricle, as in the cartilaginous, and pursuing its development longitudinally and laterally, to complete the peculiarity of the class it now represents.

The cerebellum of the inferior mammalia is scarcely more developed than that of birds, the middle lobe predominating over its other parts, and a space still being left between the anterior border of the lobes of the cerebellum and the posterior border of those of the cerebrum; this space being gradually obliterated as we rise from the lower to the higher orders, whilst the middle lobe, which was first predominant, is apparently diminished from the increase of the lateral, which, in man and the higher mammalia, are excessively developed, covering all the subjacent organs. The cerebellum of quadrupeds traverses, in its fetal state, all the permanent forms allotted to the classes beneath them. In the earlier

and middle periods of gestation, the middle lobe of the cerebellum, or its rudiments only, are apparent; this is the permanent state of the reptilia and pisces. At a later period, the middle lobe preponderates over the lateral—such is the permanent disposition of the parts in birds; subsequently, the lateral lobes equal the middle, and at a later period they surpass it. If we examine the permanent state of the cerebellum in the various orders of the mammalia to whom we have brought it, we shall see this inverse ratio increase in the development of the lateral lobes, or hemispheres, from the bat to the elephant and rhinoceros, the ruminantia, the carnivora, the apes or quadrumana, from the seals and cetacea to man.

In the human fœtus, the first rudiments of the cerebellum are not apparent till the termination of the second month of utero gestation; its late appearance in the economy of man strictly according with the similar phenomenon in animals. At this period a thin lamina of medullary substance may be observed arising on each side of the fourth ventricle, from that portion of the medulla spinalis forming the corpora restiformia; the laminae not being united in the centre, but free and floating over the cavity of the ventricle, and thus representing the permanent state of the part in the lowest reptilia. At the third month the corpora restiformia unite on the median line, and partially cover the fourth ventricle under the form of a medullary membrane, which is quite smooth, and without any appearance of striæ, elevations, or depressions; this being the disposition of the part in the higher reptilia, as the "testudines." During the succeeding months—the fourth, fifth, and sixth—the vermiform process, or middle lobe of the cerebellum, acquires a great increase of development, and the eminences and transverse fissures remarked on it become more distinct and numerous in passing through the permanent disposition of the part, in the osseous and cartilaginous fishes and birds. About this period the growth of the middle lobe is apparently arrested, and the subsequent organization of the cerebellum is remarkable in the origin and transverse development of the lateral lobes. The middle and lateral lobes are always developed in an inverse ratio with regard to each other, the predominance of the middle over the lateral being the fundamental character of this part of the brain in the lower mammalia, whilst the development of the lateral over the middle lobes is characteristic of the most perfect organization—as that of the quadrumana and man. This development of the lateral lobes, little marked in the lowest mammalia—as the rodentia—goes progressively augmenting from the latter to the ruminantia, solipeda, and carnivora, to the quadrumana of

man, in whom they arrive at their maximum of development. The organization of the cerebellum, in all animals, commences in the manner we have described, and proceeds through its successive gradations till it is arrested at that point which represents the disposition of the class to which it belongs.

From this exposition of the mode of formation and development of the various parts of the brain, it is evident—

1st. That the formation of this organ is submitted to certain laws which are uniform in the whole series of animals;—that its origin commences by the most simple type, and its subsequent organization in the more perfect animals, traverses the various permanent grades allotted to the classes beneath them, till it remains fixed in its own peculiar disposition.

2dly. That the cerebrum and cerebellum are developed in an inverse direction with regard to each other—the cerebrum being formed from before backwards, and the cerebellum from behind forwards; the last parts organized being the distinctive characters of the brain in the higher mammalia, and consequently (if certain parts of this organ are the seat of peculiar faculties) the residence of those which are, properly speaking, moral or intellectual, since they exist in man alone.

3dly. That Haller's doctrine of the evolution of germs (which asserts that all the viscerae are perfectly formed, before conception, in the maternal germ) is false and incorrect; and the progressive formation of the brain alone proves the opinion of the great physiologist to have been mere hypothesis, since the analogies between the earlier periods of formation of the fetal brain, and the permanent states of this organ in the lower animals, are striking and perfect.

4thly. The mode of formation to which the various parts of the brain are subjected, enables us to explain satisfactorily many of its congenital malformations, where, from some arrest of the formative impulse or power, the development of the brain has been retarded, and the fetus is born with an imperfect organ, resembling, in one or more of its parts, the organization of an animal beneath it.

For further information upon the subject of this lecture, consult—

"Gall et Spurzheim, *Anatomie et Physiologie du Système Nerveux.*" Paris, 1810, 1819.

"Reil, *Archiv für die Physiologie,*" tom. viii. ix. xi.

"Tiedemann, *Anatomie du Cerveau,* &c. par Jourdain." Paris, 1823.

"Meckel, *Manuel d'Anatomie generale, descriptive, et pathologique,* par Breschet et Jourdain." Paris, 1825.

"E. R. A. Serres, *Anatomie Comparée du Cerveau.*" Paris, 1826 and 1827.

"Blumenbach's *Physiology,* by Elliotson." London, 1823.

"Desmoulins et Magendie, *Anatomie des Systèmes Nerveux des Animaux a Vertebres.*" Paris, 1825.

THE LATE DOCTOR GOOCH AND HIS BIOGRAPHERS.

To the Editor of the London Medical Gazette.

SIR,

THE biographers of the late Dr. Gooch, in their *Lives of British Physicians*, contained in the 14th number of the *Family Library*, lately published by Murray, have repeated and given currency, apparently without reflection, to a most flagrant act of literary and professional injustice committed by that physician against me, which my friends advise me not to leave any longer unnoticed. In publishing his work on the *Diseases of Females*, Dr. Gooch took the opportunity of introducing into his volume, in the form of an Appendix, a paper on Contagion, which had previously appeared in the *Quarterly Review*. That physician not only avowed himself on that occasion to be the author of the paper in question, but ventured to insinuate, in defiance of the most palpable evidence to the contrary, that to him alone the merit was due of having settled the long-agitated question of the reality of contagion, and of having secured the strict maintenance of the *quarantine laws* of the country, which, else, would have been abrogated. His words are these:—

"About the year 1825 great pains were taken to persuade the legislature, that the plague is not a contagious disease, and that the *quarantine laws* are a useless burthen to trade. Two committees were appointed by parliament to hear evidence on the subject, and the government was on the eve of modifying and relaxing those laws. There were many persons far more competent than myself to put the question in its true light; but seeing that *not one would undertake it*, I wrote the following paper, and published it in the *Quarterly Review*, as the best pulpit from which to address the government and the people of England." . . . "The article worked well. I received a com-

munication from his Majesty's ministers that it satisfied their minds on the subject; *the quarantine laws were left untouched*; and the subject which had been so actively discussed before, has been since scarcely alluded to." — (Gooch, Appendix to the Diseases of Females, 1829.)

Who, that is unacquainted with the literary history of the important discussion referred to by Dr. Gooch, can peruse this passage from his work without coming to the conclusion, that the anti-contagionists were on the eve of succeeding in persuading his Majesty's ministers of the folly of believing in contagion, and of the absurdity of enforcing any *quarantine laws*, when Dr. Gooch providentially stepped in with his article in the Quarterly, and by means of it brought ministers to their right senses, and fixed their determination on those momentous questions? If one of Dr. Gooch's reputed biographers, who, being himself a medical man, ought to have been better versed in the real history of those questions, could pen, or suffer his co-editor to pen, such a passage as the following, it could not excite surprise to find that the uninstructed had fallen into a like error:—"His essay," says the biographer of Dr. Gooch, "settled the question of the contagious nature of that disease (the plague), at least for the present generation."

It may sound harshly, after such assertions, to state, that nothing can be further removed from reality than the whole of this exposition, (excepting where Dr. Gooch speaks of some communication from the King's ministers, with which I have nothing to do, but which appears inexplicable,) and that the assertions themselves give a most incorrect and distorted view of a highly interesting period of the modern history of political medicine in England. Yet so it is. Dr. Gooch is wrong as to dates—is wrong as to facts—is wrong as to conclusions, and his biographers are equally so. As long as Dr. Gooch's assertions were confined to a medical work, destined by its nature to have a limited circulation, principally among my own brethren, who must soon have detected the error of his pretensions, I felt no inclination to embitter, by a public remonstrance, the last few months of an existence, which, it was evident, would terminate in an untimely death. I knew, moreover, that

the members of the profession, who are in the habit of reading, were aware of the many years' toil and literary labour which I, among several other individuals, had bestowed on the two questions of contagion and the quarantine laws; and that in carrying on my discussion and frequent communication with government and the legislature on those subjects, many years before Dr. Gooch had enlisted under the same banners, I had brought into the field, what he could not bring, much practical knowledge and long *personal experience* respecting the plague, as well as the quarantine laws. I therefore felt no uneasiness on the score of any little merit which might belong to me, for having been mainly instrumental in bringing those important questions to a salutary conclusion. But when the unjust pretensions of Dr. Gooch to that merit are brought forward in a positive and cathedraic style by the editors of a work of more extensive circulation, and one which is addressed to a larger and more general class of readers, it behoves me to break silence, and give to my contradiction a similar kind and degree of circulation. And now for the proofs.

It was in 1819, and not in 1825, that "great pains were taken to persuade the legislature that the plague was not a contagious disease." The immediate effect of this attempt on the part of the anti-contagionists was the appointment of a Committee, in 1819, followed by a Report to the House of Commons, in which it was stated, that the opinion of all the competent witnesses who had been examined, except two, *had proved to the satisfaction of the Committee*, that the plague was a contagious disease; and that report so far settled the question of contagion to the satisfaction of the King's Ministers, that not another word was uttered on the subject for five years after, nor any attempt made to disturb the quarantine laws during that period. Was Dr. Gooch examined before that Committee? Was he deemed a competent witness? No; his name does not even appear; whereas mine stands not unobtrusively among those of several contagionists who brought forward a host of facts in support of their doctrine. But as mere oral evidence appeared to me insufficient on that occasion, I undertook, in a work written for the purpose that same year, to answer

all the objections started by the apostle of non-contagion, Dr. Maclean. I disproved in that work all his assertions, and brought forward so many additional facts, of several of which I had been an eye-witness, that none but Dr. Gooch ever ventured subsequently to say "that no competent person *before him* had undertaken to put the question in its true light." Dr. Gooch compiled his article in the Quarterly with my own arguments, my own references, my own quotations, and narrative of events; and, above all, with the principal facts contained in my letter on the plague and contagion, addressed to the President of the Board of Trade, in 1819 (Lord Goderich). He also borrowed largely (and still without acknowledgment) from the printed evidence laid before the House of Commons, which went far to shew "the question in its true light." Nay, the very words with which the Report of that memorable Committee conclude afford a striking proof that the question of contagion required not the farther assistance of a purely theoretical writer on the plague like Dr. Gooch, in order to be settled. "Your Committee *see no reason* to question the validity of the principles on which quarantine regulations appear to have been adopted."

Again, it was in 1824, and not in 1825, that some endeavours were made to obtain from government certain modifications of the quarantine laws; in consequence of which, the subject was referred to a committee on foreign trade, *then* sitting; nor was there ever, as Dr. Gooch has stated, a second committee appointed in 1825. The committee on foreign trade set out by first admitting as *unquestionable* the contagious nature of the plague, and betook themselves to examine competent witnesses on the subject of any possible or proper modification in the established laws of quarantine. Here, also, we look in vain for the name of Dr. Gooch among the medical witnesses examined. The report to the House of Commons mentions only four of them—Sir Gilbert Blane, Dr. Pym, Dr. Newbury, and myself—and on reference to the minutes of their evidence, it will appear, first, that I was examined at great length; secondly, that the reporters allude specifically to that evidence, as affording much practical information respecting the quarantine laws; and, thirdly,

that not the least vestige of a doubt is expressed by the reporters of the reality of contagion or plague; that point having, as I before stated, been preliminarily admitted.

But there remains a still more extraordinary part in this *exposé* of Dr. Gooch's groundless assertions. The report of the committee on foreign trade having shewn, upon the authority of competent medical witnesses, that the then existing sanatory laws were susceptible of some modifications, which, without endangering the public safety, might afford relief to commercial interest, up started a few wrong-headed M. P.'s, who, in the absence of his Majesty's ministers in the House of Commons, spoke at random on the subject—railed against the doctors and the quarantine—suggested the total abolition of the latter, and hailed the introduction of a bill which they hoped would go the length of bringing about that desirable consummation. Such language, coupled with the fact advanced in the same house by an honourable member during the second reading of the bill, that government had taken upon themselves to allow a vessel from Egypt to unload at Liverpool without performing quarantine (a fact not contradicted by Mr. Huskisson, who had imprudently authorized such a proceeding), produced the effect of throwing the neighbouring states, and their representatives in this country, into the greatest consternation; and forthwith there issued from France, Spain, and Italy, edicts condemning British vessels who should arrive in the ports of those nations from England to perform quarantine. This was precisely what I had predicted to ministers as far back as 1819, when I urged such a probable event as the strongest argument that could be employed for not interfering wantonly with the sanatory regulations of the country. "Let it be borne in mind," I then stated, "that by the abrogation of laws imposing very trifling shackles on a limited trade, besides exposing the whole nation to the visitation of a very destructive disease, you will also subject the *whole shipping trade of this country to the vexatious obligation of performing quarantine in every port of France, Spain, Portugal, and Italy, at all times, and under all circumstances: England, without quarantine laws, will instantly be noted in*

the books of health, by every European nation, as an infected country!" The same language I held, in 1824, before the committee on foreign trade, who in consequence put, among others, the following question to me:—"Do you think that relaxation in this country would induce foreign countries to make more strict regulations respecting English vessels?" To which I replied—"There is little doubt of it;" and the events of 1825 proved it.

Things having come to this pass, and the *relaxing* bill being about to be read a third time, did I *relax* in my endeavours to effect that which Dr. Gooch states that he alone effected by means of his article in the Quarterly? No; on the 28th of May 1825, I addressed a long letter to Mr. Huskisson, in the Times newspaper, warning him of the consequences of that bill and of the language used by some of the members in the House of Commons upon it; urging, at the same time, fresh arguments and new facts against such a bill. To ensure success to my remonstrances, I gave to that letter greater publicity, by printing it also in a separate form, and sending it to each member of both houses of parliament before the bill could be read a third time. Then it was that the Treasury Bench started up as one man against the non-contagionists, who had till then ran riot for want of opposition; then it was that Mr. Grant, on the 4th of June, stated that the real intention of government was to simplify, not to *relax* the quarantine laws—a declaration which served to allay the great uneasiness of foreign ministers; then it was that Mr. Canning made that ever-memorable peroration, in which, after asserting the *firm belief of government in the validity of the doctrine of contagion in plague, and the necessity of sanatory laws*, concluded with inviting the non-contagionist members, if such was their inclination, to make experiments in *corpore vili*; then it was that the quarantine bill before the house, after undergoing various alterations, ultimately passed on the 27th of June, 1825, into a law of the realm, and gave rise to an order in council, dated the same month, enacting, if not more rigid, certainly more effectual quarantine regulations than had existed before. And thus this momentous question was finally settled, as Mr. Canning observed in his place in

parliament, "with the concurrence of the house and that of the community at large, who, he was happy to say, did not share in the wild theories of a few rash men whose inconsiderate language had been high producing mischief to the country greater than they seemed to be aware of."

Now, sir, this glorious and final result; this confession of the belief in contagion on the part of the executive and the legislature of the country; this promulgation of restrictive laws founded on that belief; this conclusion of a question in which I had had the good fortune to take a prominent part, and which was never afterwards either revoked in doubt or re-agitated, I again repeat took place in JUNE 1825; and the paper of Dr. Gooch, on which he and his biographers have ventured to ground his right to the glory of having accomplished such mighty deeds, was published in the Quarterly Review, "as the best pulpit from which to address the government and the people of England!" full six months after their accomplishment, or in other words, in DECEMBER 1825!!

Assuredly, sir, you can require no farther comment after this from

Your obedient humble servant,
A. B. GRANVILLE, M.D.

Grafton-Street, Berkeley-Square,
22d September, 1830.

DR. JOHNSON'S REJOINDER TO DR. PHILIP.

*To the Editor of the London Medical
Gazette.*

SIR,

It is not my intention to intrude so far on your valuable pages as Dr. Philip has done, partly because a discussion between an author and his reviewer may not be so interesting to the public as to themselves, and partly because I think I have more useful employment for my time. Dr. Philip's reclamation embraces three principal charges against me, as his supposed reviewer:—1st, that I have not read his work; 2dly, that I have misrepresented the author; 3dly, that I am ignorant, not only of the work itself, but of the objects dis-

cussed in it. These are grave charges, but I hope to be able to meet them.

1st. If, by not reading the book, Dr. P. means that I have not read every line of it, I fear I must plead guilty. But if Dr. Philip can produce a single individual in the British dominions—except himself and his printer—who has read the whole of his work, I hereby promise to pay him a bonus of ten per cent. on the balance of profit arising from the sale of the book, as shewn by Longman and Co.'s ledger annually.

2d. The gravest charge is that of MISREPRESENTATION, and the following is what Dr. P. brings forward as the evidence:—“In the 319th page he (Dr. Johnson) says, ‘But by attention to the lungs, he (Dr. Philip) thinks he can tell the early symptoms that are and that are not attended by tubercles.’—*Med.-Chir. Rev.* What will the reader say when he is informed that I have devoted no less than nine pages to prove that the presence of tubercles *cannot* be known by the *early* symptoms, but only by those of a *very advanced* stage?”

These nine pages do not contradict me, but Dr. Philip himself,—if words have any meaning in this world. Let the reader turn to page 155 of the Treatise; and peruse the following passage:—

“Of all the vital organs, the lungs are the most liable to change of structure. It has been supposed that, in the lungs, as in the heart, this change will sometimes arrive at a stage which defies our means, before it produces any symptom by which its presence may be detected. *Tubercles*, it has been supposed, may thus be formed. If this *ever* happen, which I *greatly doubt*, it must be very rarely; because I have found that, in the *most consumptive* habits, the *first symptoms* can be generally checked, and perfect health re-established.”

Now what becomes of the nine pages to prove the *non-detectability* of early tubercles and other diseases, when we have here an entire disbelief in such *non-detectability*, and an assurance that he, Dr. P. can not only detect the *first symptoms* of tubercles and other diseases, but check and cure them, “*in the most consumptive habits.*” So much for the charge of misrepresentation!

Dr. Philip says I accuse him of stealing from his own work on Febrile Dis-

eases, when treating of carditis; and he roundly denies the charge. The crime imputed to him is not so great, in these days, as to give him much uneasiness. It is only robbing Peter to pay Paul, at the worst—or, in other words, transferring literary property from PHILIP WILSON to WILSON PHILIP. When, indeed, I found him repeatedly referring to the work on Febrile Diseases, as, for instance, at pages 139, 140, 141, for *further* information on carditis, it was no very great stretch of imagination to suppose that *he* drew from an excellent source of information which he so strenuously recommends to his readers. But no; and therefore I may be in error.

3dly. Dr. Philip avers that I am “ignorant, not only of *every part* of his treatise, but even of the objects proposed by its publication.” These objects must surely be a knowledge of the nature and treatment of diseases; and as his book embraces a very wide range of diseases—viz. of the head, the heart, the lungs, the stomach, &c.—in short, as it is a kind of treatise *de Omnibus rebus et sanitas tuenda*, the extent of my ignorance must be commensurate with that of his knowledge. It is true I have had my “thirty years” of observation and experience, as he has had; and if I am still in total ignorance of so many matters, it is more from want of ability than of inclination to learn. If Dr. Philip be strong, he ought also to be merciful. We are not all born with the same calibre of intellect.

Dr. Philip has some bowels of compassion, however. He says, “I fear Dr. Johnson sometimes reads as he writes—too fast for *profit* either to himself or his readers.” I suspect that I might return the compliment, with the addition of another word after *profit*—*reputation*. And here I would ask Dr. Philip (provided it be a fair question), what is the reason of his *re-christening* his book? It was “A Treatise on the Nature and Cure of those Diseases which precede Change of Structure,” &c. but *now* it is, “A TREATISE ON THE MEANS OF PRESERVING HEALTH,” &c. I am exceedingly curious to know, and I am sure Dr. Philip will gratify my curiosity. What were the *symptoms* which *preceded* this “change of structure” in the title-page of his book? I have a notion that they were rather

more obvious and unequivocal than those which attend incipient tubercles; and that his very intelligent nurses in Paternoster-Row discovered them, without the light of the "*vital functions*" to guide them.

Lastly, does Dr. Philip think I was serious when I expressed my terror lest his work should so enlighten the public as to render doctors unnecessary? I suspect the French revolution and the Belgian divorce have somewhat disturbed the doctor's brain. "These are not the days (he exclaims) of passive obedience, even with respect to our profession; and when the cure is *tedious*, and the patient's mind entire, &c. it is no *small advantage*, as far as we can, to *carry him along with us*." So, so, Doctor! Again: "The times when *science* should be made a *mystery* are passed away." To be sure they are. Science has changed into an *art*; and I should not be surprised to see Dr. Philip *sans culottes*, and with the red cap of liberty on his head, reading lectures on hygiene and physiology, to the citizen-philosophers of St. Giles's and Saffron-Hill. I believe my greatest enemies will not accuse me of making a mystery of medicine, or concealing any means of alleviating disease from my brethren. But, with all my accumulated ignorance, I will starve rather than condescend to vulgarize medical science to the comprehension of the rabble, who, after all, can never comprehend it—and that for the *advantage* of "carrying my patients along with me, in *tedious* cases."

I will ask Dr. Philip one more question before we part. Had I beplastered his book with praise, and represented it as one of the most talented productions of the age in which we live, would he have questioned my candour in a long letter to the Medical Gazette? Would he not have had better grounds for questioning my candour, under such circumstances, than as the matter now stands? There is a tribunal superior to that of the critic—the PUBLIC. To that tribunal Dr. Philip, as well as myself, is amenable. I shall cheerfully abide by its decision.

JAMES JOHNSON.

Oct. 17, 1830.

CASE OF DEATH

FROM

RUPTURE OF ONE OF THE SEMILUNAR VALVES OF THE AORTA.

BY DR. PLUNDERLEATH.

(For the London Medical Gazette.)

A. B. immediately after an examination before the College of Surgeons, most honourable to himself, complained of being generally unwell, with symptoms of indigestion; to dissipate which he was recommended to go to the coast, and was visited for the first time on the third of last month. At that time he had regained his appetite, but complained of a sense of fulness and of oppression about the chest, occurring in paroxysms, with despondency and symptoms almost amounting to complete hysteria. His pulse was full and strong, and he was recommended to lose blood. Having neglected this advice, in two days the symptoms became so aggravated that twenty ounces were taken from the arm with relief. The strength of the patient, however, becoming impaired, he was confined to bed with the above symptoms almost daily occurring, and more or less aggravated, especially those of hysteria. The pulse became intermitting, attended with a sudden jerk, which last symptom was particularly observable in the carotid arteries. His thirst was at no time much increased, and the urine only decreased in quantity within a week of the termination of life, and did not shew the presence of albumen. The stethoscope, used by an experienced practitioner, did not indicate the specific nature of any disease of the heart. The pulse for three days before death became regular, and on the morning of the second of October, when making an effort on the night chair, the patient suddenly expired. During the three days preceding dissolution the functions of the liver were suspended.

Dissection.—Slight adhesions of the lining membrane of the chest; lungs much gorged with blood; pericardium contained four ounces of sero-sanguineous fluid, but shewed no signs of inflammation. The heart was of remarkable paleness; its substance very soft, much enlarged, and very thin, and so flabby

as to make it difficult to examine it, the ventricles falling flat together. The right ventricle about one-third part of its usual thickness; the left ventricle very thin, and towards its apex remarkably so. The semilunar valves of aorta very much thickened, red, and in the tendinous margin loaded with calcareous matter. The appearance was as if studded with innumerable points, of the smallest possible size, like millet seeds; they were hard, and giving the feel of powdered bone. The appearance of the heart on first viewing it *in situ* was that of a diseased and thickened bladder; the substance tore very easily, suffering the fingers to be pushed through with great ease. The aorta reduced to half its size in diameter, and a good deal resembled parchment. In the right cavity of the chest a pint of sero-sanguineous fluid, including a large quantity of hydatids; in the left cavity a pint of similar fluid. One of the semilunar valves of the aorta was ruptured transversely to its base; the other valves healthy; stomach and liver healthy; spleen enlarged to twice its natural size; intestines healthy. In reviewing the above dissection, it is singular to find the left ventricle, which in the natural state is nearly twice the thickness of the right, to have lost so much more of its muscular structure, and to find that where the elasticity and contractility of the heart were so much diminished from the absorption of its cellular tissue and muscular fibre that rupture did not take place in its parietes, which were so much thinner and softer than in their state of healthy structure, but took place in a valve which had acquired a preternatural firmness.

Ramsgate, Oct. 14th, 1830.

ANALYSES & NOTICES OF BOOKS.

“L'Auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

The Dublin Hospital Reports, and Communications in Medicine and Surgery. Vol. V.

THE Dublin Hospital Reports already contain many important contributions to medical science, and the new volume

(the fifth), just published, is not inferior to those which have preceded it. We are glad to perceive, by a notice in the Preface, that it is intended hereafter to publish these volumes at shorter intervals.

The contents of the present volume may be described as made up partly of essays on particular subjects and partly of detached cases, or of groups of cases, with some remarks appended to them. In the present analysis we shall confine ourselves to the first of these, gleanings, for other departments of our journal, some of the more interesting parts of the miscellaneous communications.

The first portion of the volume which we shall bring under the notice of our readers, is occupied by two papers on the subject of the circulation.

Physiological and Practical Observations on the Utero-Placental Circulation, and the Phenomenon of Placental Soufflet, with its utility in detecting the existence of Pregnancy, and the Death of the Fetus in Utero. By EVERY KENNEDY, M.D. Licentiate of the King and Queen's College of Physicians in Ireland, and Assistant Physician to the Dublin Lying-in Hospital.

M. Kergaradec, in a memoir which he published on auscultation, in 1822, directed attention to the fact that, if the ear be applied to the abdomen of a pregnant woman, with or without the intervention of a stethoscope, a peculiar sound will be perceived—that is, if the pregnancy be sufficiently advanced—to which he gave the name of *placental soufflet*. This particular appellation was derived from the circumstance of his observing that the sound was most perceptible at that part of the parietes of the uterus where the placenta was found to have been attached. This sound, as well as that emitted by the foetal heart, may sometimes be distinguished through the patient's clothes; but such examinations are best conducted by having the individual in the supine recumbent posture, with a sheet merely spread over the abdomen.

Dr. Kennedy, who has made extended observations on this subject, remarks, that the placental soufflet, though it does not present invariably the same character, yet most frequently corresponds to the description given by

Jaennee of the "bellows-sound." Sometimes it assumes a sawing or hissing sound; and where the latter is the case, the soufflet is so protracted that one has not yet ceased when the next has already commenced. Dr. Kennedy, in illustration of his views, enters, after these preliminary remarks, into a description of the placental circulation, so far as this is known—a limit which renders his description necessarily confined;—indeed he only enters upon this part of the subject as preliminary to the inference that the soufflet depends upon the transmission of the blood through the arteries of the uterus where the placenta is attached to it. At the same time, however, he deems it possible that the passage of the blood through the arterial tubes and cells of the maternal part of the placenta, may likewise have some share in its production.

"The placental sound is present in pregnant women only when the utero-placental circulation exists, and ceases when the vessels which serve to sustain this function are no longer pervious: a fact which we can ascertain by examining a woman shortly before parturition, when we observe this phenomenon in full energy; and again, when the uterus is empty and perfectly contracted after delivery, or when the fœtus having died *in utero*, an obstruction in this system of vessels is produced, in all which cases not the slightest vestige of the phenomenon can be discovered. The sound is distinctly periodical, alternating with intervals of cessation, and corresponding in every case with the mother's pulse at the wrist, with which it is synchronous. The sound is always heard in that part of the uterus where the placenta is or has been attached, a fact which I have frequently proved by manual examination, when it has become necessary to introduce the hand into the uterus to remove the placenta, as well as by ocular demonstration after death. The circumstance also of this sound existing in the cow, the only animal in which I have as yet detected it, exhibiting similar characters to those already enumerated, goes a considerable length in proving that it depends on the utero-placental structure, which we have already seen in this animal approaches near to that of man. Add to the above the anatomical structure of this part of the human uterus, as already explained, so peculiar and unlike any other struc-

ture in the body, the further consideration of which we will enter on presently, when we come to consider how this phenomenon is more immediately produced."

That the placental soufflet is partly dependent on the passage of the blood through the maternal part of the placenta, is rendered probable by the change of character which the sound undergoes when the circulation is confined to the arteries of the placental portion of the uterus—as in those cases where the phenomenon is observed after the placenta has been expelled, or after the death of the fœtus; circumstances which do not of necessity cause the discontinuance of the soufflet. The following cases illustrate these points.

"I was called to a lady in Britain-street, who had been in labour for some hours. I found the funis protruding beyond the external parts, void of pulsation, and quite cold to the touch. I learned from an experienced midwife in attendance, that the funis had been expelled suddenly with the discharge of the liquor amnii an hour before; the pulsation in it was at that time observable, but ceased shortly afterwards. Under these circumstances all hopes of saving the child, either by returning the funis or hurrying the delivery, being at an end, I proceeded, while the patient was at rest between the pains, to observe what indications the stethoscope would afford. On a careful investigation no fœtal heart's action could be detected. The placental sound was, however, distinctly perceptible at the upper part of the uterine tumor, and towards the left side: it was full, but shorter, more abrupt in its termination, and wanting the sibilous whiz already spoken of as characteristic of the perfect utero-placental circulation. In the course of two hours a dead born female child was expelled, exhibiting every appearance of recent vitality.

"This case proves, first, the continuance of the placental sound after the fœtal circulation has ceased; secondly, the modified form which it then assumes; and lastly, goes a considerable length in support of the opinion, that although the sound owes its existence principally to the passage of blood through the arteries of the placental part of the uterus, yet that, to produce the perfect soufflet, it is necessary the blood should also traverse the placenta itself.

Here the fœtal circulation must of necessity have ceased, yet the blood continued to pass through the uterine vessels which had supplied it. How then are we to account for this? We must recollect that the maternal circulation, whatever connexion may exist between it and that of the fœtus, is, strictly speaking, independent of the latter, and, if we may use the expression, complete in itself. Dr. Hunter says, 'while the placenta remains adherent to the uterus, any injection made by the uterine arteries fills not only these vessels, but also the cellular part of the placenta; and if we continue the operation, the injection returns from the cells into the veins of the uterus, and fills them likewise. The same thing happens, but in an inverted order, when we begin by injecting the veins.' Thus then, the circulation in the mother and maternal part of the placenta, being independent of that of the fœtus, we can understand how a phenomenon produced by the former should exist where the latter has ceased. From this, however, we might be led to expect that the sound should exhibit the same characters, whether the fœtus be dead or alive. In forming such an opinion we should, as the further examination of the subject will shew, fall into error.

"Another case bearing on this point is that of Helen Lacy, who was delivered in the hospital, October 18th, 1829, of a girl, her ninth child, having been nine hours in labour. She complained much of after-pains. On seeing her forty-four hours after delivery, the uterus was to be felt, large, full, and rising high in the abdomen. On applying the stethoscope, an abrupt but distinct soufflet was observed by Dr. Collins, my late colleague Dr. Darley, and myself, occupying a situation on the left side, and near the fundus of the uterus. I had examined this patient previous to delivery, and detected in this situation the placental soufflet, sonorous and partaking of the sibilous character. Here the sound was in every respect similar to that which we had in the former, or funis case, and in this there can be no question as to the non-existence of either fœtal or placental circulation.

"The conclusion deducible from these two cases is, that the sound is altered by the change in the circulation of the blood, which, in place of passing

through the arteries of the placenta (from the absence of the organ in the one case, and although present in the other, from its being unnecessary and perhaps impervious), is taken up by the anastomosing vessels, here so numerous, and carried direct to the venous sinuses and veins of the uterus, and thus conducted back to the maternal system. This will explain the reason why, in cases where the child has been for some time dead in utero, as where a syphilitic taint exists in the parent's system, the delivery is effected and the placenta expelled, often without hæmorrhagic discharge; as in such the uterine circulation, independent of the placental, has had time to establish itself. The placental also, when expelled, exhibits here an exsanguineous and altered appearance, indicating its not having recently been in the discharge of its functions. I think it probable that cases do occur in which the circulation between the uterus and maternal part of the placenta continues, if not unimpaired, at least still to be kept up after the death of the fœtus."

Dr. Kennedy next proceeds to consider and discuss the arguments adduced by a German author, Dr. Haëis, but we confine ourselves to the practical application of the phenomenon in question. For the most part pregnancy is denoted by signs sufficiently appreciable, yet it must be acknowledged that in others the diagnosis is difficult, and that every thing which affords any assistance is deserving of attention. The experience of the author has led him to the decided conviction, that such assistance is to be found in auscultation, and that to a skilful ear it will often prove a substitute for examination *par vaginam*. If the placental soufflet be perceptible in any part of the abdominal tumor, particularly if the action of the fœtal heart can also be detected, we may safely conclude that the woman is pregnant. When the sound of the fœtal heart is distinct and unquestionable, the placental soufflet becomes only of value as an additional proof, but is not essential to the diagnosis. But there are two circumstances under which the presence of a fœtus in the uterus may be inferred when the heart's action cannot be heard: the first is, the obvious one of the fœtus being dead; and the second, where, in the very early periods of utero-gestation, the action of the fœtal heart cannot

yet he detected. Dr. K. has never succeeded in discovering the placental soufflet till after the second month, but has frequently done so in the tenth, eleventh, and twelfth weeks. Among other cases detailed in illustration of the assistance which this symptom affords is the following:—

“I was sent for one morning by a lady, who came over clandestinely from the sister kingdom. The statement she gave me was as follows:—She had for some months been in the habit of receiving the attentions of a gentleman for whom she had formed an attachment, but unfortunately fell a victim to her father's caprice, who, after countenancing this attachment, suddenly withdrew his consent to their union, and insisted on her marrying an individual of his selection. Ten weeks had elapsed from the time of her first giving way to illicit intercourse, when she consulted me; during which two monthly periods had passed without the usual menstrual discharge. About ten days before my seeing her, in consequence of some active exertion, a discharge of blood took place from the vagina, which lasted for a few days. Her father urged her compliance with his wishes, and she, dreading to enter the marriage state whilst there was a possibility of her being pregnant, consulted a medical man of eminence, who after the usual investigation, pronounced that such was not the case: impressed, however, with a painful foreboding of the true nature of her state, although she had no further symptom of pregnancy than that already mentioned, she determined on obtaining further advice, and under pretence of visiting a friend in the country, came over to Dublin. On the most accurate examination, I could ascertain no further grounds for suspicion, than the presence of a remarkably distinct soufflet, which was discoverable on pressing the end of the instrument in the pubic region over the uterus. Relying on this, I gave her to suppose that there was a strong likelihood of her being pregnant, although I could not actually pronounce such to be the case. The result fully justified the confidence I reposed in this as a means of diagnosis, for exactly nine months from the period when she calculated, she gave birth to a child.”

But we have above hinted at another very obvious and important benefit

which may accrue from the subject of the present paper, namely, ascertaining the life or death of the fœtus in utero. The placental soufflet remaining, when the action of the fœtal heart is absent, places the fact of the child having perished beyond a doubt.

We now pass to the consideration of some interesting circumstances connected with the circulation in the adult, contained in a paper

On the Effects produced by Posture on the Frequency and Character of the Pulse, in Health and in Disease. By ROBERT J. GRAVES, M.D. &c. &c.

He must be a very superficial observer who has not noticed that posture has a considerable effect on the character of the pulse, especially as to its frequency. It is these changes which form the subject of Dr. Graves's paper. He states that in a healthy adult the pulse is more frequent in the erect than in the horizontal posture, by from six to fifteen beats in the minute, the difference increasing with the frequency of the pulse at the time of the experiment: thus, if it has been raised to 90 or 100 by previous exercise, the variation may amount to twenty or even to thirty beats. One obvious explanation that might be offered of the phenomenon in general is, that more muscular effort is required to keep the body in the erect than horizontal posture; but Dr. Graves ascertained that the effect continued when this apparent cause was removed, by contriving to have individuals retained in the erect position without any effort of their own. It was conjectured that if the body was placed with the feet up, and the head down, a still further retardation would occur than when the body was horizontal; but the result did not confirm this idea, the inverted posture producing no retardation of the pulse.

In all other diseases in which the author has investigated the pulse in different postures, he has found a difference in the erect, sitting, and horizontal postures: but—and we request attention to what follows—“in six cases of hypertrophy with dilatation of the heart, no such difference was perceptible, although all these patients, at the time of my making the experiment, were in a debilitated state, which it will just now appear is that in which the changes induced by position are the

most remarkable. In four of these cases the existence of hypertrophy with dilatation has been ascertained by post mortem examination, and of the other two, a man and a woman, at present in the Meath hospital, there can be no doubt of the state of the heart in one of them, while in the other, the existence of hypertrophy is more than probable. For the sake of accuracy I shall give the precise results of the experiments I made before the class on these six patients; where two numbers follow each other, they denote successive quarters of a minute, that being first which immediately followed the change of posture.

DOYLE:

<i>Monday</i> ,	Pulse in Horizontal Position,	72
——	Sitting,	..... 72
——	Standing,	..... 80
<i>Tuesday</i> ,	—— Horizontal,	..... 72
——	Sitting,	.....80,72
——	Standing,	.....80,72
<i>Wednesday</i> ,	—— Horizontal,	..... 72
——	Sitting,	..... 72
——	Standing	..... 72

MALONE:	—— Horizontal,	..... 60
——	Sitting,	.....76, 60
——	Standing,	.....76, 60

“In both of these cases, although the pulse during the first quarter of a minute after the change of posture, rose in frequency, yet in the next it fell to the previous standard; indeed it may be remarked that the greatest frequency, where muscular exertion has been used to assume the sitting or erect posture, is observable in the first ten seconds which follow that exertion, both in health, and still more remarkably in disease; and consequently the first quarter, or even half of a minute, should be rejected where we wish to ascertain the permanent alteration thus produced.

“In two other cases, Gorman and Reilly, in whom the hypertrophy and dilatation had attained to a great size, even this acceleration during the first few seconds was scarcely perceptible, and the pulse almost at once resumed its former standard. The same observation applies to the two patients at present (5th July) in the hospital: in the man the pulse is 76, both when he is lying or sitting; in the woman, in whom certainly extreme hypertrophy with dilatation exists, the pulse is constantly above 100, and the same in both

postures. They have been both long ill, and are much debilitated by the effects of the disease, and of the remedies employed to mitigate its violence.”

Dr. Graves deduces the following conclusions from an extensive series of observations:—

“1st. That the greatest difference occurs in patients labouring under fever, or in a debilitated state in consequence of fever or any other cause. It may amount to 30, 40, or even 50, between the horizontal and erect postures.

“2dly. That this difference decreases after the first quarter of an hour in most cases, but always remains considerable, as long as the same position is observed.

“3dly. That in persons not much debilitated, the difference is much less than that stated above, and often does not amount to more than 10.

“4thly. That when the patient lies down, the pulse rapidly falls to its former standard.

“5thly. That in some the increase in frequency is greater between the horizontal and sitting posture than between the latter and the erect; while in others the contrary takes place; so that generally the frequency in the sitting posture may be taken as a *mean*.

“6thly. In persons convalescent from fever or acute diseases, I find it extremely useful to the physician to ascertain the comparative frequency of the pulse in the horizontal and in the erect position. The greater the difference, the greater is the debility of the patient, and consequently the more guarded must his medical attendant be in allowing him to sit up for any length of time, particularly if the pulse on his lying down does not resume its usual degree of frequency.”

Statements in some respects analogous to the preceding are made by Dr. Thomson, in his valuable work on Inflammation, and as we remarked at the commencement, the general fact must be familiar to every man of moderate observation; at the same time, we do not know of any one who has made the subject matter of especial investigation, and the paper of Dr. Graves is therefore calculated to elucidate a fact not always sufficiently attended to, and certainly of considerable importance in reference to symptomatology.

A Demonstration of the Nerves of the Human Body; founded on the Subjects of the Collegial Prizes for 1825 and 1828, adjudged by the Royal College of Surgeons. By JOSEPH SWAN. Part I.

THESE plates are extremely beautiful; the different filaments of the nerves are followed to great minuteness, and are engraved with wonderful clearness. To the lecturer on anatomy they must be invaluable, and should their accuracy be found commensurate to their splendour, they will connect Mr. Swan's name with one of the most important applications of art to the purposes of science which the present enterprising age has produced.

The Anatomy of the Human Body. Illustrated by one hundred and fifty-eight Plates, taken partly from the most celebrated Authors, partly from Nature. By ANDREW FYFE, Fellow of the Royal College of Surgeons, Edinburgh. Edinburgh, 1830.

The plates, of which the copy before us is a fresh edition, have long been known to the profession. They may fairly be described as plans of the body—for the most part very indifferently engraved, but sufficiently accurate and distinct to be of great assistance to the student. They are, besides, wonderfully cheap—witness one hundred and fifty-eight plates, with letter-press, for two guineas!

DISLOCATION OF THE OSSA INNOMINATA.

On the morning of the 17th December, Lieutenant S. of Light Cavalry, a muscular man, about 36 years of age, met with the following accident.

While on parade, his horse stumbled, and fell; Lieutenant S. was thrown forward over the horse's head, and was on his knees and hands, when the horse in recovering his fall, again fell, struck him on the perineum with his head, and came with the whole weight of his body upon the left hip; to use his own words, "the horse appeared to drive him into the ground, he heard the bones make a noise like the rattling of a bag of pebbles, and he thought his bowels were

driven out in front; he found he could not stand, and when being placed into the dooly, the bones made a snap, and gave him great pain."

He arrived at his house in a quarter of an hour, and was placed on his bed; the position of the limb was natural in every respect, and I moved it in various directions without giving him any pain, or hearing any crepitus. I now turned him over very gently, and when on the right side, I perceived a slight projection at the posterior and superior spine of the left ilium; but when he had completely turned round on his face, the projection was not perceptible, nor was there any pain on pressing the part, nor any appearance of fracture, and the position of the limb was quite natural. I again turned him on his right side, and when in that position, I pressed my right hand on the hip-joint, and with my left bent the thigh towards the abdomen; in doing this, the bones of the pelvis made a harsh grating noise, unlike any usual crepitus, and it appeared to me as if the pelvis were completely divided; the motion gave him great pain, and he requested me not to repeat it. I now turned him over very gently on his back, in which position he was easy, excepting a slight pain at the sacro-iliac symphysis; the limb remained in the natural position, and was exactly the same length as the other.

It appeared to me a marked case of dislocation of the ilium from the sacrum, but such an occurrence being very unusual, from a similar cause, I requested the attendance of Messrs. Campbell, Leese, and Spencer. From my description, and observing the position of the limb, and the ease with which it was moved, they thought the injury must be of the nature I supposed; and did not think it necessary to make any further examination, as it must be attended with great pain.

The patient died next day.

On removing them, (the intestines), and detaching the psoas and iliac muscles from the os innominatum, on which there was much effused blood, a total separation of the ilium from the sacrum was discovered, at the sacro-iliac symphysis, and a small transverse fracture of the ilium, nearly two inches in length. On cutting through the recti muscles over the pubes, about an ounce of brown-coloured fluid escaped, of an urinous smell. The ossa pubes were

disjointed at the symphysis, the cartilage was torn from the bone on the left side, leaving the surface rough, and there was a space of about half an inch between them*.

WASTING OF THE TESTICLE.

THIS has been remarked by Sir Astley Cooper as a consequence of inflammation, and by Mr. Brodie, if we remember right, of indulgence in masturbation. Baron Larrey gives a more detailed account of the several causes of this curious affection. Sometimes, when the swelling produced by mechanical injury has subsided, the testicle gradually diminishes in size until it completely wastes. In some cases which our author relates in another part of the work, a wound in the back of the neck, affecting the cerebellum, has been followed by more or less wasting of these organs. The abuse of venery; the employment of preparations of opium, whether applied externally or injected into the urethra for gonorrhœa; and especially immoderate indulgence in alcoholic liquors containing much narcotic matter, are very active causes of the complaint.

At the end of the first campaign in Egypt a number of the soldiers of the French army complained of the almost total disappearance of their testicles, without any venereal affection to account for it. They remarked that they began by losing the sensibility of the generative organs, which no longer preserved their vigour or their form, but gradually softened. So slow and insensible was the change, that they usually only discovered the malady when the testicles had nearly disappeared. On examination at this period, they were found near the ring resembling beans, whilst the cord was equally diminished and wasted. When both testicles were affected, the patient was deprived of his sexual powers and desires; he became melancholic; the voice was altered; and the beard ceased to grow. Nearly fifty soldiers were judged incapable of service on these accounts.

M. Larrey attributes the disease to

the extreme heat of the Egyptian climate, and the laborious marches through the Desert, which softened the texture of the testicle, and occasioned at first a kind of enlargement, succeeded by the wasting in question. M. Larrey also assigns a destructive effect to the use of alcoholic and narcotic substances, but cannot explain very clearly their *modus operandi*. Into the composition of the brandy of the country, made from dates, there enter several plants of the class of solanum, such as the pimento and the berries of the cherry laurel. M. Larrey thinks it probable, that the action which such substances exercise on the nerves of the stomach, is transmitted sympathetically to the testicles, and occasions their absorption. The ancients, it is said, procured the same thing by the application, for a length of time, of the concrete juice of hemlock to the scrotum. These conjectures of the Baron's must be taken for what they are worth, but it is not improbable that the immoderate use of such substances, combined with fatigues in a burning and enervating climate, may exercise a mysterious agency on the glands of the testes.

When the wasting is complete, art possesses no power to renovate the organ. In the earlier stages of the malady, we may, perhaps, effect some benefit by withdrawing, as far as possible, its causes, and by employing some vapour-baths, with dry friction on the surface of the body, irritation in the lumbar and sacral regions, tonics, and generous food. Spirituous liquors should be avoided, or, at all events, procured without adulteration. A suspensory ought always to be worn in warm climates, and frequent ablutions of the body with cold vinegar and water, and abstinence from immoderate venery, are necessary as preventive measures. M. Larrey has had several soldiers affected with this complaint under his care in France. It pursued the same course as in Egypt, and the patients confessed that they had been addicted to immoderate indulgence in venery, and strong, adulterated spirituous liquors. In one of these individuals, both testes in a short time almost disappeared. From being originally of a very robust constitution, he lost his beard and manly features, and looks like a woman. A soldier, whilst landing from a vessel in Egypt, received a violent blow upon the back of the neck, after which the

* Mr. Baker, in *Calcutta Medical and Physical Journal*.

testicle wasted to the utmost degree. These facts, collected by the Baron, are curious and worth perusal*.

MEDICAL GAZETTE.

Saturday, October 23, 1830.

"*Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso.*"—CICERO.

LONDON UNIVERSITY.

THE seeds of dissension were surely sown when the walls of this establishment were founded. It is never at rest. No sooner are the disagreements and differences of the Professors arranged, than the pupils set themselves to work to create new matter of disorder. A more inharmonious institution may not easily be pointed out: it has been during the whole of the last week one scene of turbulence and misrule, which, with whatever reluctance, we deem it our duty not to pass unnoticed. We can with difficulty bring ourselves to believe that a number of influential individuals—the governing body of a metropolitan University—should be so deficient in common sense as not to be aware of the ill effects of a lack of decision in the management of their concerns; but the blame must be imputed somewhere—either to them, or, which is nearly the same thing, to those to whom they delegate their authority in emergencies of this nature, and with whom the suppression of such riotous and unruly proceedings as those we are about to allude to, rests—at least in the first instance; and the first and the last resort in such cases are generally identical—half the battle depends on the first judicious movement.

Various accounts have reached us touching the disturbances of last week, from which we gather that the University has been annoyed mainly through

the turbulence of an individual totally unconnected with the establishment. It appears that there had been some debating in a medical society held within the walls of the institution, on the subject of the propriety of adopting an academic costume—or some such trivial topic: in this debate an ex-student, who has latterly acquired much notoriety by figuring at Clerkenwell, Kennington Common, and such-like interesting fields of display, assisted and took a conspicuous part. The Warden, upon this occasion, thought proper to put in force a standing order for the exclusion of the popular orator—treating him as an impertinent intruder. However, a few days afterwards, this same individual made his appearance in one of the class-rooms, and, after the Professor (Mr. Bennet) had concluded his lecture, addressed the assembled students in a strain of the most violent description. He obtained admission, as we are told, surreptitiously, and harangued for an hour and a half against the Council, calling them a parcel of potters and haberdashers—dealing out the most violent invectives against Mr. Pattison—and professing himself to be the organ and representative of the dissatisfied students. Now the Warden could not have been unacquainted with all this. Yet we find the same *excluded* person permitted, without the slightest molestation, to attend an adjourned meeting, held in one of the large theatres (the anatomical), on the following day. It is scarcely necessary to add that a similar scene was enacted. Nor was this all; another—a third, day was occupied by the students, who were thus kept in a state of continued agitation, in framing a memorial to the Council to demand their reasons for excluding Dr. Alexander Thomson from the walls of the University, and calling upon them for an investigation of the conduct of Mr. Pattison; more than

* Med.-Chir. Rev. from Clinique Chirurgicale.

insinuating, in conclusion, that the memorialists would disconnect themselves from the establishment if their demands were not complied with. This gentle document was signed by 110 pupils of the University! What further notice the Council will take of it, we have no means of knowing; but the only proceeding as yet adopted is the re-enactment of their former order for the perpetual exclusion of the obnoxious individual.

We cannot help thinking that in all this affair there has been a most lamentable deficiency of energy and firmness displayed on the part of the management. If, indeed, the Council acted with all that foresight which it was their duty and in their power to employ (meeting as they do, only at intervals,) while they relied on the promptitude and prudence of their Warden for all that decision in enforcing the rules of academic discipline which such an emergency demanded, we must only say that the Council acted well, but were ill supported in their executive department. But if, in addition to all this, and as we have heard, upon what we know to be the best authority, *tricolour emblems*, and slips of paper bearing inscriptions, such as "Thomson and truth!"—"Thomson's cause is our own!"—have been allowed to be scattered over the theatres of the University without investigation, and thus a mixture of political feeling with insubordination allowed to go unnoticed, we can have no hope—no opinion of the fitness of the persons intrusted with the direction of what they choose to call an University—no expectation whatever of its ultimate success, or of its becoming—without considerable modifications,—a suitable school for the training of the youth of the country. Before the time at which we write, the principal promoters of these disturbances ought to have been expelled, and their names published in the newspapers.

PROFESSOR THOMSON.

DR. ANTHONY TODD THOMSON has addressed a letter to the Editor of the Times, stating that he is not "the Dr. Thomson" who has lately been rendering himself so conspicuous. We feel for the painful situation of that meritorious physician in being compelled to take this step, and delicacy forbids to us to say more than that any one who had been led into the mistake which he has thus rectified, must have been extremely ignorant of his situation and character.

CHOLERA.

DESPATCHES have been received, under date of the 15th ult. calling the attention of Ministers to the progress of cholera in the south-east districts of Russia. Apprehensions are entertained at St. Petersburg lest the epidemic should reach the more northern parts of the empire, and orders have been issued by our own government to the officers of the customs in the different parts of the kingdom, to scrutinize the bills of health of all vessels arriving from any ports bordering on the infected countries. The measure cannot but be looked upon as prudential, though the possibility of the disease being so propagated is extremely doubtful; in fact, the whole history of cholera, as it has of late years prevailed in India, China, and Persia, would seem to shew that it is essentially epidemic in its nature, traversing particular regions, regardless alike of quarantine regulations and every other barrier which has hitherto been opposed to its progress. So much is the Russian Government impressed with the importance of the subject, that they have offered a reward of twenty-five thousand rubles, nearly 1100*l.* for the best dissertation on the subject in any of the European languages.

THE PHYSICIAN'S DIARY, IN BLACKWOOD.

SOME very clever articles have been published in two or three of the later numbers of Blackwood's Magazine, under the title of "Passages from the Diary of a late Physician:" the first of them—a most painfully interesting story—describing the struggles of this physician in the early part of his career in London, endeavouring to get into practice, or rather to save himself from starvation, in which he is eventually

successful, more however through the fortunate occurrence of unforeseen circumstances than by the fair exertion of his talents; the other articles, stories or sketches of unconnected incidents supposed to have passed within the sphere of the narrator's practice. It has been weakly attempted by some curious persons to ascertain, or at least to speculate, who the author of the narratives might be—some affirming him to be the late Dr. Armstrong—some Dr. Gooch—while all would seem to be as sure of him as the man was of Gulliver, who swore he knew that wonderful traveller well, but that he lived at Rotherhithe, not at Wapping. It is no mean proof of the excellence of the stories in question, that so much curiosity should be excited about them and their author, and that so strong a persuasion of their veracity should be prevalent. But there is probably a good deal in the writer's incognito. Perhaps if his name were known, much of the sensation about his articles would be allayed. As literary compositions they have little merit: in this respect they are literally plain, unvarnished tales, which, by the way, may contribute not a little to give them that air of reality with which they are invested.

We notice these productions in this place chiefly because they have given rise to a question, how far the author—the physician—was justified in committing to paper, and subsequently to the press, passages in which his patients form the principal characters, and in which their private circumstances are graphically detailed, and presented to the public without sufficient regard to the secrecy which a physician is *bound* to observe towards his patient? We should think this a very fair question, were we only assured that it related to matter of fact, for we have no time for the discussion of abstract speculations; but we must say that, in the present instance, it seems to us to be a very gratuitous task to raise the question at all. The names of the personages are studiously concealed, or are expressedly fictitious; and though the stories may be founded on fact, the truth is evidently so mingled with falsehood all through, that we cannot help pronouncing them one continued tissue of fabrication (or *romance*, if it be a better name,) from beginning to end. We are by no means so severe as to think that this circum-

stance detracts from their interest or value, but it must be allowed to alter the state of the case most materially. There cannot be the least objection, we should conceive, to the publication of such stories as those passages that would not apply equally well to the productions of any professed novelist.

One instance of the author's skill in "getting up" his materials we may be permitted to point out, especially as we can trace them to a source not beyond the bounds of our own domain. In the tale, "Intriguing and Madness," in the current number, we find Sir Henry Halford's elegant illustration of a passage in Shakspeare borrowed without scruple or acknowledgment. Our readers may recollect that it was Sir Henry who, at one of the meetings of the College of Physicians, first illustrated, by a striking case which occurred in his own practice, Hamlet's test of sanity—the *re-wording of the matter*.* We have it here in the tale just mentioned, and, we think, rather lamely introduced. The insane person, to give a proof of his not being insane, volunteers the test, and quotes the very passage (from Hamlet; though the author, perhaps with intent to keep up the character the better, makes him state it to be from Lear). "'Tis this: mark and remember it! 'tis in King Lear:—

— " ' Bring me to the test,
And I the matter will re-word, which madness
Would gambol from.' "

Truly this is a little too barefaced.

But, on the whole, we are decidedly not displeased with the author of the Diary: nay, we rather incline to agree with Blackwood, that no small advantage might be derived to the public—and to literature, more particularly—from "sinking a shaft into the rich mine" of medical experience.

By the way, we were very much amused in observing the manner in which the fear of this journal influences the proceedings of a worthy contemporary even on the most trifling occasions. The writer in Blackwood speaks of what was done by the "*Lancet* or the *Medical Gazette*." The Editor of the former, in quoting the passage, omits altogether the name of the latter journal, and inserts only that of his own!!

* See *Medical Gaz.* vol. iv. p. 26.

REORGANIZATION OF THE FACULTY IN PARIS.

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE,

DELIVERED BY DR. ELLIOTSON,

October 18, 1830.

THE agitation in the French school of medicine, (to which we lately alluded in one of our leading articles), has been in a great measure allayed by an *ordonnance* of the "citizen-king" which has just been issued, granting *nearly all* that the malcontents demanded. The Duc de Broglie's report is a very lengthy, though not an uninteresting, document: we shall probably refer to it in our next number; but from the *ordonnance* we select the following particulars. The professors who were removed from the faculty in 1823 are to be restored to their chairs; those who had not been disturbed at that period are to remain still undisturbed in the possession of their places; and so are those who, subsequently to the period in question, have been chosen in due form to regularly vacated chairs. Henceforth all professorships which become vacant, are to be disposed of by *Concours*. The privileges reserved for the *Agrégés*, by the *Ordonnance Corbière*, are to be abolished. And finally, the Minister of Public Instruction is to make further report of what improvements he may deem it advisable to introduce into the schools of medicine, for the advancement of science, and the advantage of the community at large.

Yet there is a large party in the French metropolis still dissatisfied with what has been done. They have not got enough. They are provoked that the Minister should have made any reservations in his arrangements; that MM. Broussais, Magendie, and Flourens, should be appointed to chairs, under the new regime, without submitting to the *Concours*; and that that part of the *Concours* should be abolished which consisted of disputation (*argumentation*). But we shall notice these points more particularly in our remarks on the Duc's "*Rapport*." We have now merely to add, that arrangements are already being made for the first grand contest; and several eminent "doctors of physic and surgery" have entered their names as candidates for the vacant places.

Pleurisy — Ægophonia — Bleeding — Calomel and Opium — Rheumatism.

On Thursday last, gentlemen, twelve patients were received into this hospital under my care—six men and six women. The cases were the following:—Among the women, one of acute pleurisy—one of chronic bronchitis—two of peritonitis, one rather chronic or subacute, and the other decidedly acute, but partial—one of dropsy of the whole body, particularly of the abdomen, but clearly united with peritonitis—and one of hemiplegia. Among the men, there were three cases of rheumatism—one of inflammation of the hip, which appeared to have arisen from a fall many months ago—one of incipient universal paralysis, double hemiplegia—and one of chronic dysentery, with disease of the spine.

I shall select the case of pleuritis, and also one of rheumatism, for consideration this morning. My reason for selecting the latter is, that the disease affects the chest, and the case forms a comparison or contrast with that of pleuritis; and it is sometimes difficult to distinguish between affections of the internal membrane of the chest and rheumatism affecting the external part.

The case of pleuritis occurred in a woman, Lydia Poole, æt 56, Mary's ward, who has been employed as a charwoman. She had been ill two days. She said that she has been subject for the last 30 years to a cough, and to a copious expectoration. She was employed on Tuesday the 12th inst. in scouring, and went to bed on the evening of that day quite well; her feet had got wet in the course of the day; after she had been asleep about an hour, she awoke and felt a pain in her left side, which was increased by inspiration; the following day (Wednesday) she was alternately hot and cold, shivering and flushing; her cough increased and likewise the pain; she became so dangerously ill, that on Thursday she was brought for admission. The first time I saw her she was in bed (a short time after her admission), and complained of a violent stitch in her left side, in the situation of the eighth, ninth, and tenth ribs; she had frequent cough, which was short and restrained; the respiration also was short, and consequently quick; the stitch was increased by deep inspiration, by

coughing, by moving about in bed, and on pressure, so that she cried out. On applying the stethoscope, the natural respiratory murmur was less distinct in the affected part than any where else; on the other, the healthy side, it was much stronger. The pulse was 100, and rather wiry; the skin was hot, she was thirsty, her tongue was white, and her bowels had been freely opened by medicine the day before. The cough was not only short and *hacking*, as they term it, but it was attended with a good deal of expectoration—a circumstance unusual in pleurisy, and dependant on her habitual chronic catarrh.

Now this was a case of very well marked pleuritis—inflammation of the pleura. In the first place, there were present the symptoms of an internal inflammation. The symptoms of inflammation, when you cannot see the inflamed part, are pain, increased by any mechanical cause, whether pressure or stretching, and general symptoms of feverishness. This woman had violent pain—that pain was increased by pressure, and also by stretching the part in inspiration and coughing; there was a quickness of pulse, thirst, heat of the skin;—there could be no question therefore that this woman was labouring under inflammation. The pain was of a stabbing nature—precisely that which would be felt if a knife were plunged into the part; and the pulse was rather small and firm—rather wiry;—there could be no doubt therefore that this inflammation was affecting a serous membrane; and that the membrane so inflamed was the pleura, was likewise evident from the situation of the pain—it was immediately below the breast of the left side, and the pain of acute pleuritis is generally felt either on a level with the breast, or rather below this. There was likewise a short cough, and in pleurisy you always have this symptom, for this plain reason—that to cough deep would be impossible, the part not being able, for agony of pain, to bear the stretching which deep coughing requires. Generally, in pleurisy, the expectoration is scanty; but that symptom was absent in the present case, owing to the circumstance of her having been many years the subject of bronchitis; she had therefore the short cough of pleurisy, but not the dry cough with scanty expectoration. There was also difficulty of breathing, which is necessarily the case in pleurisy, but may also arise from inflammation of the abdomen, and from ten thousand causes besides inflammation. The dyspnoea in pleurisy appears to arise simply from the pain which the patient experiences in attempting to inspire deeply, or even to the natural depth, and consequently he is obliged to content himself with shallow inspirations on the affected side; and the shallowness of inspiration of course renders a greater frequency

of breathing necessary. This is almost universally observed in pleuritis. The face shewed extreme anxiety, and there was rather a leaden hue; but this I presume arose from the chronic bronchitis; the features were lengthened with the agony of pain and the difficulty of breathing.

No case of pleuritis could be better marked than this—it had all the ordinary characteristics which occur in the majority of instances of that disease, with the exception of the frequent expectoration, which was doubtless the result of chronic bronchitis. This patient had the pain in the common situation; but sometimes it is felt in different parts, even in the axilla, and, instead of being at one point, is felt over the whole side, and in extremely bad cases over both sides. With respect to the posture of the patient, it was that which is usually noticed in this disease: generally in pleuritis the patient lies towards the affected side, otherwise it would have a tendency to expand freely, which of course would be productive of considerable pain. To lie, however, on the affected side entirely, would seldom be possible, and they therefore generally take a sort of diagonal posture, in order that the healthy side may take the greater share of expansion.

I mentioned that the pain in this case was increased on pressure between the ribs; but that is not always the case in pleuritis, it only being observed in those cases where the pleurisy is in the portion which lines the ribs. In this patient pressure with the finger between the ribs produced violent pain. When the pain on pressure is very severe, and extends over a great space, I have known it impossible for a patient to incline to the affected side, and they have been obliged to lie entirely on the sound side—they have even been so susceptible of pressure, that they could not bear the bed-clothes, if heavy, to press upon the diseased side.

I presume, from the extreme agony which this patient experienced in the affected side on pressure, it must have been the costal pleura that was inflamed—the pleura lining the ribs; though, had it been only the pleura covering the lungs, the pain might have been as great as in this instance, but would hardly have been increased on pressure. The pulmonary pleura in this case may have been inflamed, but it is certain that the disease was situated at least partly in the costal pleura.

With respect to the pulse there was the usual characteristic of inflammation of a serous membrane,—it was rather hard, but not remarkably so; nevertheless as much as we frequently see it in inflammation of a serous membrane. I have spoken in my regular course of lectures of the local symptoms of inflammation according to the structure which it affects, and one of the

general symptoms of inflammation of a serous membrane, you will recollect, is, that the pulse is firm and hard. There is, however, a variety in this respect in various cases of these inflammations, and I have seen the pulse both full and soft, so that we must not expect any very great accuracy in this particular; and we are only justified in saying, that for the most part when serous membranes are inflamed, the pulse is firm, hard, and perhaps even hard and small—wiry. The pulse, I must own, in this case would not have led me to suppose that it was inflammation of a serous membrane particularly, but the local symptoms proved the fact to a certainty, and the pulse was of the usual character, though not so much so as alone to have indicated the nature of the structure affected.

With regard to the expectoration. As it is not the lungs themselves—as it is not the lining membranes of the air-passages—as it is not the bronchial tubes that suffer in this disease, but merely the external membrane of the lungs, you cannot suppose that much expectoration will occur. There may, however, from the general irritation of the organs, be some increased secretion, so that there may be a glary mucous discharge accompanying the cough: you generally see a small quantity certainly. In this case copious expectoration occurred, in consequence of the patient being the subject of chronic bronchitis. This latter disease was clearly shewn by listening to the chest, in doing which a wheezing noise was perceptible—a mucous and sonorous rattle—but which was not in itself sufficient to explain the local symptoms which she experienced. I was perfectly satisfied from her appearance—the blueness of her face—under all the circumstances mentioned, that she had been subjected to a cough, and on addressing a question to her on that point, she said that she had been so for thirty years. I saw her just now, and she said that, though free from all pain, she has a good deal of cough—as much as ever, but there appeared nothing in the inspiration but what was habitual to her, and on questioning her she confirmed this idea.

Now with respect to the ear. No doubt the case could be made out perfectly without the aid of the ear, but still no one could pretend to have acquired a complete history of pleuritis unless he knew the exact symptoms that are communicated to the ear. I listened to the state of breathing on the affected side, and found there was much less respiration there than on the other side, and simply for this reason, that it was so painful to breathe in that part, and on the same account the cough also was short. I have no doubt that, if I could have struck the part, the usual sound would have been produced, but to strike, with any accurate result, would

have been impossible, because even pressure gave so much pain. This was a case in which percussion was indeed inadmissible, on account of the pain to which such an examination would have subjected the patient, and the information to be derived from it would not have been commensurate with the pain that would have been produced,—even the pressure of the stethoscope produced suffering. I however resorted to auscultation, although the case was perfectly clear, for two reasons; first, that I might communicate to you the auscultatory state of the parts, and secondly, in order that I might learn whether there was any effusion. If there had been effusion, the respiration would not have been heard by any means so distinctly as it was, or perhaps not at all, and there would in all probability have been something like the sound of Punch's voice when she spoke. It has been observed that when a thin layer of fluid is poured out upon the surface of the lungs, a variety of such sounds are produced when the patient speaks—sometimes a noise like the voice of Punch—sometimes like the bleating of a goat—sometimes a mere nasal twang. These have been called, generically, by Laennec, *ægophonia*, from *φωνη*, *sound* or *voice*, and *αἰ*, *a goat*. These symptoms were not present in any part of the affected side, and therefore I have no doubt there was no effusion. I have just now examined her, and heard respiration of the natural strength, and no *ægophonia*. So much with respect to the history of the case and the diagnosis.

In this case we may suppose that as the patient has been the subject of chronic bronchitis, the lungs and their membranes are so irritable that they were more disposed to inflammation than any other part of the body. The exciting cause of the inflammation unquestionably was the application of cold accompanied by moisture, and applied to the body, overheated by the hard work by which she gained her bread. She had been hard at work all day, and therefore she was probably more or less heated, and it was then that she got wet: the moisture also, it should be remembered, was applied to the feet, which are a part, the application of wet and cold to which is most powerful in producing distant inflammation.

We will now consider the *treatment*. Nothing can be more beautiful than the treatment of a case of acute inflammation. Inflammation is one of the most frequent and dangerous diseases to which the human body is subject; and there is no disease in which our art is so efficacious. If the diagnosis was clear in this case, the indication of treatment was equally so. I had her placed sitting upright in bed, and immediately bled, not to this quantity or that, but to fainting. As soon as this was over, twenty leeches were applied to the seat of pain, and afterwards a large poultice. I also ordered her

five grains of calomel and three grains of opium at the same time; and directed the calomel to be repeated in six hours, and again at the expiration of that period. It was taken three times in the whole. The next morning I found she was able to lie on the affected side, the cough was no longer short, the pain was quite gone, and she scarcely complained of any thing but the chronic bronchitis, which she had before the attack of pleurisy. It appeared that on lying down in bed she fainted, and remained in a state of syncope, or something like it, for a considerable time. She was relieved after the general bleeding, but it was not till after the application of the leeches that she experienced such decided benefit. She slept soundly all night, though she had not slept at all the night before; there was scarcely any cough; she could now take a deep inspiration, and could not only lie upon the affected side with ease, but bear it pressed. The pulse had been at 104, and was still at 96, which is a very common occurrence in diseases of this kind for some days after the disease has been lessened to a sufficient extent to ensure a cure. The pulse, however, instead of being firm as before, was soft—it was not weak, and the tongue had become moist.

I need not say that the blood was buffy. The whole mass of the coagulum was buffy, but was not drawn into a cupped form. It is highly probable that if the blood had been received into a tea-cup it would have been cupped as well as buffed. The cupped appearance is much influenced by the size of the vessel into which the blood is received. Frequently when blood is received into a wash-hand basin it will not cup, or afford buff, although, if it be received into a tea-cup, it will do both. The smaller the receiving vessel the greater is the tendency of the blood to buff, if it have the tendency at all; and the same holds good as to the cupped appearance. In this instance the blood was decidedly buffed, although it was not cupped.

On the following day (Saturday) she was, if possible, still better, and her mouth was rather sore. During the preceding day I found that she had had no stool since her admission, which was twenty-four hours, and I therefore ordered her castor oil, not for the purpose of purging her, but to prevent the irritation which a constipated state of the bowels would necessarily produce. It operated in the course of that evening, and also on the Saturday morning. Since that period she has had no symptoms, but the cough and expectoration, which are of thirty years standing, and therefore are necessarily still present. Her mouth is still slightly sore.

I need not say that in the treatment of acute inflammation, the great remedy is loss of blood, and it is better, if the patient's constitution will allow it, to take blood at

once from a vein than to have recourse to local bleeding;—neither need I say that the effect of the bleeding depends very much upon the suddenness with which it is taken. If you cause the blood to dribble away, you are doing much about the same for the patient as if you remove it by the application of leeches. The more quickly a given quantity of blood is drawn the greater is the impression made upon the system, and the greater is the benefit which the patient experiences. Where you wish to save the patient the loss of a large quantity of blood, and yet wish to make an impression upon the system, it is better to place him upright in bed, or, in cases where you wish to spare blood to the utmost, on his feet, and the loss of a few ounces will then perhaps produce syncope. In this instance I wished a certain quantity of blood to be drawn, and therefore I had her placed sitting upright in bed. In cases where there is great fullness of the system, so that it is not your object to produce a deep impression upon it, without at the same time getting away a full quantity of blood, it may be right to let the patient lie horizontally, so as to prevent fainting, till the requisite quantity is removed. Where there is a great disposition to syncope, so that you fear the flow of blood will be arrested before a proper quantity is abstracted, the horizontal position may also be proper. This patient being an elderly woman, (56,) having worked very hard, and being of spare habit, I was anxious that she should not lose a very large quantity of blood, and for that reason desired her to sit up, and yet she lost sixteen ounces before she fainted. In the treatment of acute inflammation, when you have once formed your diagnosis you must consider what loss of blood will be requisite, and then go to work briskly and decidedly, by which means you may knock down the disease without having to resort to a repetition of venesection.

It is frequently of great use to take away blood locally, in addition to general bleeding. In cases of acute inflammation local bleeding may sometimes be necessary, after perhaps general bleeding is no longer proper. But often at the onset it is frequently of use to follow up general by local bleeding, and by it you may prevent the necessity of another general bleeding. Now the use of local bleeding was strikingly shewn in this case. She was bled as much as she could be generally (syncope being produced), which was followed by relief, but it was not until the leeches were applied that the greatest benefit was experienced. I believe it is frequently a good practice, after you have lessened the force of the circulation by general bleeding, to assist the vessels of the part in unloading themselves, either by the means of cupping or leeches. After the

leeches were applied I directed the employment of a poultice, and you will find this useful in inflammation even of the chest, abdomen, and other parts, where you cannot put it upon the inflamed part itself. It soothes very much, and is particularly beneficial when leeches have been applied, inasmuch as it encourages the bleeding.

The medicines that were given were calomel and opium. From the age and constitution of this woman I was of course very anxious that she should not be bled more than was indispensably necessary, and on that account I was particularly desirous of producing more or less affection of the mouth, and tranquillizing her with opium. The use of opium after a free bleeding is frequently very beneficial. It is perhaps not advisable if the system be full, and if there be a strong inflammatory disposition, or the head is affected; but where the patient cannot spare much blood, or where a great deal of blood is necessary to be withdrawn, or morbid irritability is likely to ensue upon bleeding, in either circumstance opium is very serviceable. Under these limitations I have never seen opium act injuriously: I have not, however, given it in the former cases, and therefore I only presume it to be injurious. This treatment had a great effect on our patient, for next morning she might have been pronounced convalescent. The general and local bleeding relieved her, but the opium perhaps insured her a quiet night, and may have prevented a return of the inflammatory symptoms, and the morbid irritability of the system, which we so frequently see. It certainly was not her cure, but it operated very beneficially. With respect to the mercury, we cannot attribute the removal of the disease to that. I well know the use of mercury in cases of acute inflammation, and am quite satisfied on that point; but in this instance the relief was fully obtained before the mercury could have exerted its peculiar effect upon the system. Whether the mercury tended to prevent the return of the inflammation (for she took three doses, and her mouth became sore on the Saturday) I cannot pretend to say. I have found that the necessity for bloodletting, both local and general, in acute inflammation, has been much less where I have got the mouth tender with mercury. I consider it my duty to give it in such an affection as the present, and were the patient attacked with the same disease next week I should treat her precisely in the same way. But notwithstanding I felt it my duty to have recourse to the mercury, I see no reason to attribute the removal of the disease to that remedy, for the mouth was not rendered sore till the Saturday, and the relief of all the symptoms immediately followed the removal of blood. In any one case in which mercury is given, if you have recourse to

bleeding and other antiphlogistic measures, you are not justified in saying that the mercury does good. It is only from a series of cases contrasted, in one of which mercury has been given in addition to bleeding, and in the other of which it has not, and only the common antiphlogistic measures been adopted, that I draw my conclusions; and I know that the number of failures is very far less in that series in which mercury has been exhibited and pushed to some tenderness of the mouth. The result of my general adoption of it in active inflammation is, that I very rarely lose a case of active inflammation—almost never—unless there is organic disease at the bottom, or I am called in too late, or interrupted in my proceedings; and never find a necessity for such copious bleedings as I hear some persons talk about. Nothing is more common than to see all the symptoms decidedly give way the moment that the mouth becomes sore, or to see no further bleeding required. Had I not had a view to this operation of mercury, I should have equally prescribed the first dose of calomel, in order to prevent constipation from the opium, and to lay the foundation for an evacuation from other aperients the next morning. At my visit the following morning (Friday), I found the relief was so great that the mercury was not required, and of course it was discontinued. She took but three doses. There was no object for pushing it on. If the leeches only had been applied, we might perhaps have gone on from that day to this, pushing the disease about but not knocking it down. If we had had recourse to general bleeding only, and not to leeches also, it might have been necessary to bleed again, both locally and generally. There is nothing like knocking a disease down at once, when this is possible, and keeping it down by subsequent measures. How far the opium assisted in the latter way, I will not pronounce.

I listened to the chest on Saturday, and again to-day, not merely as a matter of curiosity, but to ascertain if there were any effusion; for it is common, in cases of this kind, to have a little effusion take place, and after a time to have it absorbed. Some gentlemen present may recollect a case of pleuritis in the same ward during the summer, which case was cured in the same way. The girl's mouth was sore, and the case, upon the whole, was perhaps more severe, because the pain extended more over the chest, and lasted longer. There effusion took place, the voice being like that of Punch, when listened to at the lower half of the back, and at the affected side. Though she was free from pain and cough, and felt pretty well, there was still some dyspnoea, and this egophonia lasted for a considerable time, when profuse sweating suddenly burst out; and as these sweatings continued, the Punch-like voice from the chest rapidly

declined, and ultimately ceased; the ægophonia at once lessened, and the effusion became totally absorbed. It was a very remarkable case. Now as I hear nothing of the kind in this woman, and respiration is well heard over the affected side, I am sure there is no effusion; and this may be quoted as a good specimen of the termination of inflammation by resolution. Here was a termination of inflammation in perfect health, not followed by gangrene, or suppuration, nor even by effusion, nor any fresh circumstance or symptom; though effusion, or increased secretion in the part or the surrounding parts, little or much, is a usual occurrence at even the favourable close of inflammation.

The other case of which I will speak by way of comparison and contrast, is one of rheumatism of the chest. The pain was situated higher up, and diffused, and was very severe.

William Key, æt. 19, in William's ward, had been ill a fortnight. At first he had rheumatism of the left knee, and he now and then has it there still; but he has it particularly about the left acromion, all over the same shoulder, clavicle, and front of the chest. There is great pain of the chest, and considerable tenderness on pressure; and great pain on inspiration, but no cough and no expectoration. Now the existence of pain in the chest, rendered severely cutting on inspiration, might give the idea that the person was labouring under pleuritis. The two diseases, however, are very easily distinguished by any one who has seen rheumatism of the chest before. The diagnosis was this: the pain was not confined to one spot, but more or less diffused over the front of the chest generally; it is rare for the pain of pleuritis to be so diffused. In the next place, there was great heat of the part: in active rheumatism there is generally heat of the part, whether it be situated in a joint or in any other portion of the body. Farther, the pain was increased by the very slightest pressure, such as could not influence the pleura; and not merely between the ribs, but on them—even on the sternum, where the pleura, again, could not be influenced. In pleuritis the pressure must be between the ribs, or if on the ribs must be very strong to give pain, unless in the most violent cases, where the whole parietes suffer as well as the pleura. The pressure which produced pain in the woman was between the ribs, but in this man the least pressure on the ribs themselves, or even upon the sternum, produced great distress. Fourthly, rheumatism existed also in other parts. From the combination of all these symptoms, particularly from the third, I inferred the nature of the disease. The heat and the diffused pain alone would not

have shewn the nature of the disease, because sometimes in pleuritis both those symptoms are present. The fact of rheumatism being in the shoulder would not alone have been decisive, because in some cases of pleuritis we have pain also about the axilla. Nay, the rheumatism in the knees, or other parts, would not have been decisive, because a person may have both pleuritis and rheumatism. The same cause that produces the one disease may produce the other, and is commonly in both—the application of cold, especially with moisture, and when the body is overheated. Taking, however, all these symptoms conjointly, there could be no doubt about the disease. He had no cough, no expectoration—and this still farther illustrated the true nature of the disease; though in some instances of severe rheumatism of the chest there is accidentally a very slight catarrhal affection, which produces a little expectoration—just as much as is often seen in pleuritis. The man was not ordered to bed, and he shewed no distress of countenance; yet in some cases of rheumatism of the chest I have witnessed such indisposition as to confine the patient to bed: for acute rheumatism any where, and therefore in the chest, may occasion this; and I have seen the pain on breathing so great as to occasion much anxiety of countenance.

The *treatment* of the two diseases would be exactly the same in principle; but in the case of rheumatism there would be no occasion for the adoption of such active measures as in the case of pleurisy. Whether a nice diagnosis is necessary or not in any disease, it should invariably be made, because we should always practise our art in the best manner; but there are two reasons why it is important to make a careful diagnosis here: in the first place, in order that you may be enabled to inform the patient and his friends whether there is danger or not—pleurisy being dangerous, while rheumatism is not, except it attack some vital part; and secondly, because, although you employ the same measures in the two diseases, it is not requisite in rheumatism to employ them to the same extent. I ordered no general bleeding for this man, but thirty leeches to be applied on the front of his chest; and as he had rheumatic pains about the shoulder and other parts of the body, I judged constitutional measures requisite—gave him five grains of calomel night and morning. The leeches completely relieved the front of the chest, but the next day I found the same pain in the opposite shoulder (this is the character of acute rheumatism, to leave one part and fly to another), and I ordered the leeches to be applied there. On the following day I found the rheumatism in the neck, and I had leeches applied to that part, and to-day found him infinitely better. He had

gone out of doors contrary to my wishes, and has a little sore throat, and still pain in the right shoulder; but the chest is liberated from the disease, and there is little now the matter with him.

As no patients of mine have died during the past week, I have no information to give you upon morbid anatomy.

EDINBURGH INFIRMARY.

Cases of Amaurosis treated by Strychnine, under the care of Dr. Shortt.*

[Concluded from the preceding No.]

CASE V.—James Rankine, admitted July 7th, 1830. Two years ago he was suddenly seized with deep-seated pain over the right eyebrow, accompanied with dimness of vision in the right eye, from a constant appearance of small floating objects before his sight. The pain in a short time disappeared, but the amaurotic symptoms continued increasing till fifteen months ago, since which time he has been unable to distinguish light from darkness, unless with a very small portion of the inner side of retina. The iris of the right eye is of a dark hazel colour, that of the left grey. Pupil moderately dilated and regular; slightly sensible to light. Posterior part of the eye has a greenish hue; has no pain in the eye.

Three months ago symptoms of ineipient amaurosis commenced in the left eye; not, however, preceded by head-ache, or pain in the eyeball. These have since gradually increased, so that he is now unable to read print of a large size at a moderate distance. There is a constant appearance of muscæ volitantes before his eyes, and these have occasionally a dazzling brightness, and at other times assume the appearance of a reticulated web. Pupil moderately dilated, regular, and sensible to light; the posterior part of the eye seems natural. Health good, other functions natural. Blisters, purging, and mercury, have been used without relief.

On admission, the application of extract of belladonna to eyebrows caused great dilatation of pupils, but considerable impairment of vision.

Blisters were applied to the temples, and pulv. strychniæ, gr. v. at three different times to their surfaces, without producing any sensible effect.

Pilulæ submur. hydrarg. c. opio were then administered till ptyalism was produced; and while the system was under the action of mercury, blisters were applied to the temples; but no change in vision took place till on the application of one grain of strychnia to their surfaces, violent vertigo, head-ache, and other symptoms of its action were

induced. Vision at the same time was greatly improved, so as to enable him to read common sized print; the appearance of scotomata in a great measure removed, and the iris of the right eye rendered more sensible to light.

The pulv. strychniæ was subsequently applied with the same effect in a slighter degree, and vision continued improving in the left eye, when, being a farm-servant, he was obliged to return to his work, and was dismissed by desire on the 24th July.

CASE VII.—Walter Henderson, æt. 43, admitted June 3d, 1830. Has had for 22 years almost perfect amaurosis of his right eye, a small portion only of the retina remaining sensible to light. It commenced after an attack of iritis, which was removed by the usual antiphlogistic remedies; but the symptoms of amaurosis continued increasing, and in a short time attained its present state. The iris is of a dark brown colour, and insensible to light. Pupil moderately dilated, and irregular; posterior part of the retina has a greenish hue; has no pain in the eye.

The left eye remained unaffected till two months ago, when the usual symptoms of amaurosis commenced in it, accompanied with those of iritis. The latter were removed by antiphlogistic treatment, but the amaurosis has continued still to increase. All objects appear to him covered with a dense mist, which at times has a dark brown, at other times a light grey, colour. It at first appeared in the form of *scotomata*, which have gradually increased so as to assume the above-mentioned appearance. Occasionally in the dark, flashes of light appear before his eyes. Is unable to read the largest print, and when walking the street constantly runs against obstacles which come in his way. Pupil is contracted, very irregular, and sluggish in contracting on exposure to light. The posterior part of the eye has a very slight greenish tinge; has no pain in the eye or head-ache; health good; other functions natural.

After admission the extract of belladonna was applied to the eyelids. By it the pupils were dilated; appeared very irregular, and vision at the same time much impaired. Pil. submur. hydr. c. opio, were administered till slight ptyalism was induced, and a blister applied to each temple; but no change in the vision took place. One grain of pulv. strychniæ was sprinkled on the blistered surface without producing any sensible effect. Next day, however, on the application of two grains, slight head-ache, vertigo, and the usual symptoms produced by strychnia in a small degree, were induced. Vision in the left eye was at the same time considerably improved, so as to enable him to read print of a moderate size, and the cloudi-

* Edinburgh Medical and Surgical Journal.

ness rendered much less dense. His system was again slightly affected with mercury. Blisters applied to his temples, and pulv. strychninæ, ij. grains, to their surface, which in a short time produced vertigo, head-ache, slight tremors, and other constitutional effects. Vision was also greatly improved. Has, during the treatment, had slight attacks of iritis, which were always removed by the application of belladonna to eyelids.

Reported as follows:—August 9th. Is able to read the smallest print. Visus nebulosus almost completely removed. Pupil of left eye still small and irregular; that of right moderately dilated, regular, and sensible to light. No change in vision.

11th.—Dismissed much relieved.

CASE IX.—Janet Barclay, æt. 28, admitted June 18th, 1830. Two years ago symptoms of incipient amaurosis commenced in her right eye. These continued gradually increasing till a few months ago, since which time the amaurosis has been almost perfect, a small portion only of the retina retaining its sensibility, so that at the distance of six inches from the eye the sphere of vision does not exceed a circle of half an inch in diameter, and in that small space sight is very imperfect, from a constant appearance of *muscæ volitantes*.

The application of extract of belladonna to the eyebrows produced its usual effects. The system was affected slightly by mercury, and purgatives administered without any beneficial effect. Blisters were then applied to her temples, and 1 grain of strychnine sprinkled on their surfaces. This application was continued till it occasioned considerable vertigo, head-ache, tremors, &c. Vision rapidly improved under the above treatment, which was at different times repeated with the same success, so that on July 26th the sphere of vision in the right eye was restored to almost its natural size, and the appearance of *muscæ volitantes* removed. The visus reticulatus in the left eye had likewise almost completely disappeared. Had no pain in the eyeballs or head ache, and she was dismissed cured*.

[Dr. Shortt makes some interesting remarks on the preceding cases, from which we extract the following.]

These affections are often ascertained with difficulty, and, therefore, cases may be viewed as such, though arising from structural derangements of the interior of the organ of vision. In these, as in others arising from severe or long-continued internal inflammation and other causes, strychnine, I apprehend, can be of no possible service. The same thing may be said of amaurosis

depending on clots of blood, or tumors which press upon the optic nerves. Where again, as is frequently the case, the disease is owing to the absorption of the medullary portion of the nerve, it must be allowed that nothing can be expected from it or any other medicine. In fine, in my opinion, it is only in cases of paralysis of the optic nerve, and those arising from congestion, that strychnine can be advantageously employed; and I think the preceding examples, and those already published by Mr. Liston, Mr. Guthrie, and others, must decidedly prove its efficacy in them. It is not immaterial to observe, that in such cases its beneficial operation is considerably aided by the previous use of mercury, possibly either by exciting the nervous system, by rousing the energy of the capillaries, or by increasing the powers of absorption, or by all three conjointly. Thus, in No. 5, strychnine failed until mercury had been employed; but on its application, and then only, vision was improved; and in cases Nos. 7 and 9, its decided effects followed the use of that medicine.

I cannot positively say whether the effects of strychnine are lasting, but I believe it in most cases to be so if properly used. I may safely assert also, that in no case in which I have tried it has vision been injured, where the disease existed in one eye only, or where sight was not entirely destroyed. In no case did any constitutional evils arise from its use. I am inclined also to believe, from one or two instances, that it was beneficial in removing opacities of the cornea, probably by its highly stimulating property occasioning rapid absorption.

In delicate persons, or where the system is affected by mercury, I ought to add, the strychnine should be commenced in small doses, *e. g.* not exceeding a quarter of a grain, and increased daily until it produces sensible effects on the constitution, such as headache, pricking pains over the body, or tremors, when it should be discontinued, and on resuming it, the dose should always be considerably reduced.

Where unpleasant symptoms arise, I can suppose that camphor in large doses, or an opiate enema, suited in strength to the violence of the symptoms and the constitution of the patient, or, as recommended by M. Lambert, the application of morphia in small doses, sprinkled on the blistered surfaces, will be found to give relief; but in no instance have I judged it necessary to employ any of them.

Several of the cases here detailed were attacked with erysipelas, which strychnine seems prone to occasion; but they were invariably relieved by simply rubbing about a drachm of mild ointment or cold cream over the diseased surface every four hours.

* Of the above interesting set of cases, two, but it is not specified which, were treated at the Newcastle Eye Infirmary.

MIDDLESEX HOSPITAL.

Purpura Hæmorrhagica—Land Scurvy.

JAMES LOCKMORE, æt. 35, a blacksmith, admitted Aug. 2. Poverty and low living for the last twelvemonth had greatly injured his constitution; for the first half of that period he drank two or three glasses of gin a day; latterly he seldom indulged in it. On the 1st of August, after swallowing a glass of gin, he found his mouth suddenly filled with blood; his gums and mouth continued bleeding the whole of the day, and in the evening his body and limbs were covered with spots of ecchymosis beneath the cuticle. At night he passed blood by stool. He was brought into the hospital on the evening of the 2d, and by that time was said to have spit half a painful of blood. His pulse being sharp, he was bled to ʒvij. A scanty dejection that night, unminged with blood.

Aug. 3.—Dr. Watson saw him. He had passed a sleepless night, and spit three pints of blood. That which had been drawn from his arm was covered by a semi-transparent size, adhering to the sides of the vessel; the coagulum beneath was little more than a grumous mass, and there was no separation of serum. A dark bloody discharge issued from his nose. On the inside of his mouth, on his gums, lips, and tongue, a number of livid tumors were pouring out blood: they were formed by the extravasation of blood into the cellular tissue beneath the lining membrane of the mouth, and the subsequent rupture of this membrane: they resembled hæmorrhoids that had burst, or small masses of fungus hæmatodes. His trunk and extremities were studded with spots of ecchymosis of various size and hues. Pulse 100, feeble. Great debility. Ordered

Decocti Cinchonæ ʒiss.

Quina Sulphatis gr. ij.

Acidi Sulph. diluti ℥xv. M. ft. haustus 6ta quaque hora sumendus.

To drink freely of lemonade.

and to wash his mouth frequently with a saturated solution of alum in water.

Aug 4th.—Slept for a few hours, and feels better; appetite good; bleeding from the mouth diminished; no evacuation for forty hours; urine turbid, of a dark brown colour, with a curdy deposit.

Olei Ricini ʒvj. statim. Roast meat and rice. Perstet.

In the evening a copious, dark, and offensive alvine dejection, apparently unminged with blood.

5th.—Bleeding from the mouth diminished, from the nose ceased. In the afternoon he passed bloody urine.

Perstet.

6th.—A great quantity of blood with his urine. Epistaxis returned, but the bleeding

from his mouth considerably abated. Pulse 80, more firm. Countenance swelled, and of a greenish hue, as if it had been bruised. A large green patch of ecchymosis has appeared on the inside of one knee, over the saphena vein. The course of this vein, above and below, is marked by a green tint. Bowels confined.

R Pulv. Rhei, ʒss.

Hydrarg. Submur. gr. ij. M. ft. pulvis, statim. sumend. perstet.

In the evening the bleeding from the mouth had entirely ceased. Pulse stronger.

7th.—A black solid motion. No blood in the last urine. The tumors in the mouth are detached, leaving here and there small ulcers, which are rapidly healing. Pulse softer; appearance improved. Some of the spots of ecchymosis are disappearing.

Perstet. et Bibat Vini Rubri, ʒijj. quotidie.

8th.—Urine more clear, unminged with blood. Gums still turgid. Strength returning, and says he has not felt so well for a twelvemonth. Perstet.

9th.—Urine limpid and straw-coloured; bowels confined.

Rep. Pulv. Rhei. cum Calom. statim. Perstet.

10th.—Bowels open; dejection of a more yellow colour. Better, and wishing to sit up.

12th.—Rapidly gaining strength; the spots of ecchymosis growing paler. By the continuance of the bark and acids, with a generous diet, and an occasional purge, he recovered, and was dismissed August 24.

From the severity of the symptoms, the prognosis might at first have been fairly pronounced unfavourable. The blood itself was undoubtedly diseased, escaping from the minute vessels, and probably destroying the vessels themselves. The case differed from the purpura hæmorrhagica most usually seen in this country, as typhus differs from synocha. It required the tonic instead of the antiphlogistic treatment.

Cases of hæmorrhage from every mucous surface, as well as from the skin, have been extremely prevalent at this hospital during the summer: two of these have proved fatal: in one man the inner surface of the colon was found in the same condition as the mouth of the subject of the case above; it is preserved in the museum of the College of Physicians. The other was an Irishman, whom a mob of his countrymen would not suffer to be examined after death.

ERRATA.

In our leader of last week, for an average number of each, read an average member of each; and for spirit of determination, read spirit of denunciation.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

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SATURDAY, OCTOBER 30, 1830.

LECTURES

ON

COMPARATIVE ANATOMY,

AS ILLUSTRATIVE OF

GENERAL AND HUMAN PHYSIOLOGY,

*Delivered in the Medical School of
Birmingham,*

By S. LANGSTON PARKER.

LECTURE III.

*Development of the Spinal Cord in various
Classes of Animals.*

GENTLEMEN, in our last lecture we described the elements or principal component parts of the cerebro-spinal system in the four classes of vertebrate animals.

These elements, we found, were reduced to the medulla spinalis and medulla oblongata, the optic lobes or tubercula quadrigemina, the cerebral lobes or hemispheres, with their lobules or appendages, and the cerebellum. We saw that each of the four classes possessed all these parts, with more or less modification, and in a more perfect or a more simply organized state; we saw that their origin in the fœtus and the incubated germ was alike in all, and that the specific character of the system in each was not developed till the termination of the period of gestation or incubation. We likewise noticed that the brain, and other parts of the nervous centres, in the higher animals, passed through certain stages, or phases, during their fetal existence, from a more simple to a more complicated state, repeating in their evanescent stages the grade allotted to the permanent state of these parts in the classes below them. We saw the simplicity which existed in the laws of the development of this system, and the unity of composition to which it was reduced in all vertebrate animals, the specific differences and peculiarities arising in each

class, from the predominance of one pair of lobes in the adult animal, as the cerebral hemispheres in man and the mammalia, and the optic lobes in fish. We now come to consider more particularly the separate organization of these parts in the various orders and species composing the great classes of the vertebrata, and to make a more immediate application of them to the elucidation of facts connected with human physiology. This lecture will be devoted to the anatomy and physiology of the lateral and central parts of the spinal or vertebral system, including the nerves of the spinal column, with the medulla spinalis and the medulla oblongata.

The lateral nervous system includes the double range of cords, or filaments, which, from the interior of all the muscles, from the whole surface of the skin, and from the organs of the senses, converge toward the foramina of the cranium and vertebral column, to establish a communication between these organs and the spinal marrow and brain, which are the central parts of this important apparatus. Till the days of Gall and Spurzheim, it was asserted that the nerves of the spino-cerebral system arose or took root from their respective centres, and were distributed in the organs they were destined to supply. This error was taken up and perpetuated by Gall, who attempted to prove that the roots of these nerves were to be found in the grey, cineritious, or cortical substance in the centre of the spinal cord, and that there was an increased deposit of this substance opposite the origin of each nerve. This hypothesis hardly needs refutation, since no grey matter is to be found in the spinal marrow of reptiles or fishes; and if, as Gall supposed, this was the matrice or nutritive organ of the nervous trunks in the higher classes, how are we to account for the production of these organs in the lower, where no matrice is to be met with? The lateral nerves of the brain and spine do not arise from these centres, but are formed simultaneously with the organs in

which they are found; and it is not till a late period of gestation that any communication is established between these organs and their respective centres. In many anomalous instances this communication never takes place where, by any arrest of the nutritive process, a certain degree of monstrosity is produced. In many cases where the human fœtus, or that of animals, is born without brain or spinal column, all the nerves appertaining to these organs are found, perfectly developed, in their respective parts. Lallemand*, of Montpellier, has recorded a case in which the infant was destitute of brain and spine; the nerves were fully formed, and communicated with a double row of whitish tubercles, or ganglia, corresponding to each intervertebral space; the nerves in the interior of the cranium were free and floating on the surface of the "*dura mater*" lining the base of the skull†. What takes place during the fetal state of the mammalia and man, is continued during the whole existence of the greater part of the pisces; in them the extremity of the nerve, which is generally termed the root, is merely in contact with the envelopes of the spinal cord, and thus its extremity, in by far the greatest number, is covered by its "*neurilema*," and completely isolated from any connexion with the cord itself. Again, this communication may be kept up merely by a thin filament extended between the two organs and distinct from the matter of each, both extremities being enveloped in their respective neurilemas. The communication is mediate in the lampreys, being kept up through the interposition of a certain mass of fluid placed between the extremity of the nerve and the spinal cord itself‡.

No effort of the imagination, nor any perversion of reasoning, can, in any of the instances I have mentioned, make the nerves arise from the spinal column; they cannot be engendered by the grey matter, for it does not exist; they cannot arise from the white, for they have no communication with it;—and in the case of the human fœtus we saw all these organs to be perfectly formed, independent of the existence of any cerebral or spinal mass. If we carry our researches farther into the embryo state of any animal, during the earlier periods of gestation, we shall find the spinal cord and brain to be a fluid, contained in a distinct capsule; and the nerves which are ultimately to communicate with them, completely formed in the organs they are to supply,

without any connexion with the central system. These nerves are the conductors of the properties of sensation and motion, which reside in the spinal column, from the latter to the organs in which they are found. These functions being exclusively the property of that life which is termed animal, and is under the influence of the will, are directly opposed in their development to those of the organic life, which we considered in our first lecture. The organic or nutritive functions are in play from the first moment of existence; without their full exercise, life must soon be extinct; but it is widely different with the organs of the animal sphere, which are dependent for their action upon the existence of external stimuli—as light and sound, with the contact of sapid and foreign bodies to the various organs of the senses and integuments. The lateral nerves of the spine and brain, then, which establish the connexion between the organs of the animal life and their respective centres, are not appended to these centres till the termination, or nearly so, of the period of gestation; since the stimuli which they require to bring their functions into exercise, are not applied to their appropriate organs till after birth. The lateral nerves are united to the central system toward the latter end of gestation, and acquire a more intimate connexion with it as the animal increases in age, or as the functions are more perfectly exercised. The cerebro-spinal axis, or centre, is the aggregate of the medullary or nervous organs, which are contained in the cavity of the cranium, and the central tube formed by the processes and bodies of the vertebræ, to which all the nerves we have been considering are ultimately connected, as the centre from which their properties are derived.

The spinal cord, in its earliest and most simple state, is composed of a limpid and transparent fluid contained in the pia mater, which occupies the interior of the vertebral column, of which the bony parietes are as yet not formed; the sac of the pia mater being a long cylinder, equally distended in all parts by the fluid occupying its interior. At a later period the contents of the canal are converted into a soft mass, similar to white of egg, which, on being submitted to the action of alcohol, takes upon itself a still firmer consistence. At this time the pia mater turns slightly inwards upon itself, on the anterior face of the medullary pulp, thus giving rise to the central anterior fissure of the spinal column. This membrane likewise turns inward on the posterior face, but to a much greater extent, forming the canal of the spinal cord, about which so much discussion has existed; and the true disposition of which, together with its formation, would have remained in its pristine oblivion had it not been for the assistance of

* These, No. 165. Paris, 1818.

† Vide for a representation of this species of monster, termed by Geoffrey St. Hilaire "*Anencephale*," his *Philosophie Anatomique, Monstruosités Humaines*, Pl. XIV. Fig. 1.

‡ Vide Desmoulins et Magendie, *Op Cit.* Plate 12, Fig. 1 et 2, Plate 3, Fig. 10. Plates 1, 2, 3, et 4, for representations of these dispositions in various pisces.

comparative anatomy. As the fluid which at first filled the cavity of the pia mater, and which was secreted by its internal surface, acquires a greater degree of consistence, the folds of the membrane penetrate into the anterior and posterior fissures left on the two surfaces of the spine, by the coagulation of this liquid into two medullary nervous cords of white matter, situated on the lateral portions of the tube, in the same way that it dips between the convolutions of the brain. As the contraction of the pulpy mass proceeds, the posterior fold of the pia mater penetrates farther and farther into the fissure, and dilates itself into a canal by its internal surface following up the contraction of the nervous pulp.

We have now brought the spinal marrow to the simplest permanent state in which it exists in the vertebrata; this being the disposition of this organ in the class pisces. The spinal cord, at this period, represents a hollow cylinder, terminating inferiorly in a point, and above continuous with the calamus scriptorius, which in the human subject is but a dilatation of it, the remainder of the tube having been obliterated in a manner we shall presently explain. Its thin parietes are folded from before backwards, where they come in contact, covering the cavity or canal in the interior of the spine. In the lower animals, and in the human fetus, the sides of the spinal marrow in contact at the longitudinal fissure are easily separated, and the canal in its interior is then apparent. In the higher animals, and in man, the fissure is nearly obliterated, from the increased deposition of the medullary substance of the cord. Having explained in what manner the canal is formed, we shall proceed in our description of its obliteration from the lower animals to man, in the former of whom it possesses most amplitude, whilst in the latter the medulla spinalis is a solid cylinder of white and grey matter. The pia mater being liberally supplied with blood, and the most vascular membrane of the animal economy, is, as we have seen, in contact by its internal surface with all the points of the spinal cord, from which surface on its outer part the medullary or white matter is secreted in concentric laminae, whilst from that part which we saw dipped in to line and form the canal the grey matter is exhaled and organized;—thus we have the white matter formed from without inwards, and the grey matter from within outwards. I cannot better explain the formation of the concentric laminae of medullary matter, which gradually fill up and obliterate the canal of the spinal marrow, than by calling to your recollection the manner in which the layers of coagula are formed in the sac of an aneurism: they are deposited from the circumference of the tube to the centre, precisely in the same manner, and only

differ in the mode of application of the fluid from which they derive their materials, the blood, in the case of the aneurism, depositing its laminae in circulating through the canal of the artery; whilst the medullary substance of the spinal cord is formed from the seceding arteries supplying, and indeed almost entirely constituting, the external and investing parietes of the spine.

From this mechanism of the formation of the spinal canal, we perceive that the younger the embryo in which it is examined, the thinner are the medullary layers on the internal surface of the pia mater, and the larger, consequently, its capacity. The canal of the spinal cord is diminished in proportion as the nervous laminae acquire an increased thickness; and these being deposited from the circumference toward the centre, the obliteration or contraction of the canal is in a direct ratio with the number and density of the nervous laminae deposited by the arteries on the internal surface of the pia mater. When the secretion of white matter is terminated on the circumference, the canal is completely obliterated by the successive layers of grey matter applied upon the internal surface of the white.

The latter circumstance explains the absence or permanence of the canal in adult animals, and its variations in the different classes and orders. The greater the quantity of grey matter, the less is the capacity of the canal; this substance diminishing from man to the quadrumana, ruminantia, digitata, rodentia, and aves: the canal of the cord augments in the same proportion. The diameter of the spinal canal is then in an inverse ratio with regard to the quantity of grey matter in the substance of the cord itself. In man, this substance being extremely thick, the canal is completely obliterated; in the quadrumana, the grey matter having diminished, the canal is not strictly closed; the grey matter diminishing, and the canal enlarging as we descend the animal scale. In the human embryo of the third month the diameter of the spinal canal is that of the lower mammalia, as the rodentia; at the fourth it resembles that of the ruminantia; at the fifth or sixth that of the cetacea; at the seventh month it is merely rudimentary, as in the quadrumana, the highest class of the mammalia, inferior to man. Thus the spinal cord of the human subject traverses in its evanescent stages the permanent conditions allotted to the aves and mammalia, proceeding in the scale from below upwards, in the same manner we found the brain to do in our preceding lecture*.

* Serres, *Anatomie Comparée du Cerveau*, vol. ii.; Tiedemann, *Anatomie du Cerveau*; Arsky, *Dissertatio de Piscium Cerebro et Medulla Spinali*. Halle, 1813; Nicolai, *Dissertatio de Medulla Spinali Avum*, &c. Halle, 1814; Sewell, in *Philosophical Transactions*, 1809.—The researches of these anatomists on the canal of the spinal

The origin of the spinal column in the embryo of the four classes of the vertebrata is precisely similar: it commences in a fluid state, and goes through the grades I have mentioned in an uniform manner in all. In the lowest class, viz. the pisces, the central canal continues during the whole period of life; the lateral borders are but feebly united at the longitudinal fissure, and the lamina of grey substance is so indistinct that many anatomists have denied its existence altogether. The disposition in reptiles is similar. In birds the union of the lateral borders posteriorly is more intimate: the quantity of cineritious substance deposited in the interior is greater; the central canal is not obliterated, and towards the inferior part of the cord is dilated into a sinus, which bears the name of rhomboidal. In the mammalia the union of the lateral portions is still more intimate; the canal is smaller, and the quantity of grey matter increased; the deposition of the latter substance augmenting, whilst the canal of the spine goes progressively decreasing from the lowest orders of the mammalia to the quadrumana of man, in whom no vestige of it remains except the cavity of the fourth ventricle, when the cord is not the subject of any congenital disease.

This seems to be the proper place for considering the abnormal or pathological state of the spinal cord in man, in reference to the permanent condition of this organ in the animals beneath him; where, from some arrest in its development, it has remained fixed in one of its evanescent stages, which are analogous to the constant disposition of the part in the lower animals. The canal of the spinal marrow, which we have seen existing in the classes of the pisces, reptilia, and birds, during the whole period of their existence, as also in the fetus of man and the mammalia, has been met with in the adult human subject by Haller, Malpighi, Morgagni, Portal, and a few other anatomists, who have been totally at a loss to explain its formation, and being unable to do so have considered it to be a constant disposition of the organization of the part. This is not, however, true, the canal being but rarely met with in the human subject at an advanced age, or beyond the period of infancy. By a reference to the phases through which the spinal marrow arrives at its complete development, and the mechanism of its formation in the lower animals and in man, we are convinced that the canal in the human subject is owing to an arrest or tardy progress of the development of the organ by which, instead of assuming its own individual peculiarities, it remains stationary, and represents the permanent disposition of a class or animal below it.

marrow, particularly those of Tiedemann and Serres, I have verified repeatedly by my own dissections.

We have seen that the grey matter is secreted in the interior of the white by the pia mater forming the parietes of the canal; and that where the canal is largest, as in the pisces and reptilia, the quantity of grey matter is smallest, and is indeed quite imperceptible. It has been supposed by Gall, with some appearance of probability, that this matter reinforces or gives energy to the functions of the spinal nerves; but whether, in the subjects where this canal was found pervious, and consequently the deposition of grey matter imperfect, any defect was observed in these properties during life, we are not informed. In the fetus, the interior of the spinal column is filled with a yellowish serum, which diminishes as the increase of the depositions of grey and white matter proceed. Sometimes, however, this fluid accumulates in greater quantities, and prevents the union of the lateral cords of the spine posteriorly in one or many parts of its length, or in its whole course; and in addition to its prevention of the union of the medullary portions of the spine, it interrupts the coalescence of the vertebrae, by distending and separating the osseous parietes of the vertebral column from the accumulation of fluid in the canal, now pressing out between the lateral portions of the spine and forcing backwards the membranes which envelope it; thus forming one species of spina bifida. The accumulation of fluid may be in the cavity of the arachnoid, or between any two of the membranes investing the cord; but with the disease itself I have here nothing to do farther than as its pathology may be illustrated by comparative anatomy and physiology. The species of spina bifida to which I have alluded is always congenital, and I may say always sooner or later fatal. The fluid contained in the external cyst always communicates with the canal of the spinal marrow, the formation of which I have detailed to you. It is probable that this species of the disease is incurable, since the existence of the fluid in the interior of the canal affects and retards the organization of the spine itself, whilst the collections which are external to it are comparatively of little consequence.

The spinal marrow has been found to be wholly fluid in certain rare instances of this affection; and here the process of development must have been completely arrested at the commencement of fetal organization, and the accumulation of fluid must have proceeded to a great extent, preventing the union of one or more parts of the osseous investment of the cord. These two states or conditions of the spinal marrow in hydro-rachitis represent perfectly the permanent and healthy state of this part in the pisces and reptilia, in both of whom the canal remains constantly pervious and filled with fluid; whilst in the pedomysa or lampreys, no medullary or cine-

ritious substance exists in the spine, its organization consisting in a fluid contained in certain envelopes, filling the vertebral canal, and evaporating to dryness on exposure to the atmospheric air.

Another curious circumstance with regard to the progressive change of the spinal cord in certain animals and man, is the ascension of the medullary portion in the vertebral canal and the formation of the *cauda equina*. It will be recollected that in the human subject, as well as in animals generally, that the spinal nerves are not connected to the spinal marrow opposite to the foramina in the vertebræ, through which they pass; but that they take an oblique direction, and traverse the vertebral canal from above downwards, for some distance, before making their exit. This is not the case, however, with the human fœtus during the first three months of gestation. The spinal marrow, at this period, occupies the whole length of the vertebral canal, descending to the very extremity of the coccyx; and the nerves in the vertebral foramina are placed directly opposite to their various points of insertion in the medullary mass. Coinciding with this disposition of the spinal marrow is the caudal prolongation, or, to speak more familiarly, the species of tail with which the human fœtus is provided at this period, and which disappears as the spine ascends in the vertebral canal. At the ninth month the extremity of the cord is fixed at the second or third lumbar vertebra, having undergone a species of contraction or ascension in the vertebral canal, which is completed towards the end of the fourth month, when the extremities commence their development. If this ascension or contraction of the spinal cord does not take place, another kind of monstrosity is produced, the infant being born with the caudal prolongation, of which several cases are upon record. This subject is illustrated by the metamorphoses of the larvæ of the batraciæ, as exemplified in the tadpole and the common frog. It is well known that before the appearance of the extremities in this reptile, the tail is of considerable length, and the spinal marrow is continued to the extremity of the coccyx. On the formation of the limbs the tail disappears, the cord ascends, and the *cauda equina* is formed. The ascent of the spinal marrow in all quadrupeds takes place to a certain extent where the tail is diminutive, as in the genus *lepus* and the *chiroptera*, with a variety of others. We see that the nerves are drawn out of their respective organs, and lengthened by the ascent of the spine in the vertebral canal; thus producing that degree of obliquity in their course within the vertebræ which is so apparent in man*. I consider this ascent of the spine to be owing to a vital contraction operating in the organization of the mass itself, by

which it is rendered firmer and more compact, as the globules which compose it are more approximated. This contraction is more evident in the lower half of the cord, where the obliquity of the nerves is more marked, this obliquity increasing as we descend from the medulla oblongata and the upper portion of the spine, where the cord is fixed, to the lowest or most inferior part, where its connexions are not so intimate.

CLINICAL OBSERVATIONS
ON
WOUNDS PRODUCED BY FIRE-ARMS.

BY M. DUPUYTREN.

[Continued from page 73.]

Various Injuries of the Bones.

WITH respect to the different kinds of splinters, those of the first—the *primitive* kind—which are entirely detached, cannot by any possibility live again. They are to all intents and purposes foreign bodies buried in the flesh or bone, and there they cause abundant suppuration, with fistulous openings, if they be not absorbed, which is a rare occurrence, or discharged naturally, which is just as rare, or, in short, extracted by artificial means. The sooner, therefore, these detached portions of dead bone are removed the better.

And with regard to the *secondary* species of splinters, some of them eventually become primitive, and should be extracted, whilst others continue to receive sufficient nutriment from the flesh and vessels, and in the end contribute usefully to the formation of callus.

Finally, the *tertiary* sort, the result of necrosis, maintain their position until the vital eliminative process cuts them off. Till this is done, the extremities of the bones cannot unite, inasmuch as this process requires the existence of vital energy at both ends. A consolidation of the fractures, however, takes place; the periosteum, the cellular tissue, and the soft parts swell, inflame, harden, and acquire a fibrous consistence, then a cartilaginous, and at last an ossified structure at some points: these bony points become extended, and through their means the union of the extremities is effected. If the necrosed fragments be too large to make their

* Vide Serres, op. cit. vol. ii.

escape, a sequestrum is formed, which gives rise to and keeps up the existence of fistulous openings. These are the sort of cases which have so amply supplied the wards of the Hôtel Dieu during the last fifteen years. Patients thus affected have their limbs shortened or deformed in general: the callus is large and irregular, with two or three fistulæ frequently opening on their surface. A probe introduced meets the sequestrum, and produces the sound of metal striking against bone which has no moisture in it—no life. The only plan is to enlarge the opening, to trepan the callus, and to extract every portion of the dead bone.

Sometimes, however, the formation of the callus is prevented by the restless condition of the patient, or by the extreme depth of the affected parts. The tediousness of the cure, in such circumstances, is enough to dishearten both the patient and his medical attendant: it may be protracted for six months, for a year, or longer. But the ends of the bones will eventually begin to give way, when no time should be lost in effecting their removal, and bringing the sound extremities together. The limb will be shortened, certainly, but this it is utterly impossible to prevent: all that can be done is to keep them properly straight. It may be observed that the callus which is formed in such cases as these is well defined, and essentially different from that which forms in ordinary instances; it is formed, not round the bone, but between the ends of it. In other respects the treatment is exactly the same; but a superior degree of attention, and more frequent dressings, are required. If the sore be not dressed regularly every day, it will assume a most disagreeable character, and the consequences may be very unpleasant.

But we have not enumerated all the foreign bodies which may be found in these wounds; thus parts of the skin, cellular tissue, tendon, or muscle, in the shape of eschar, are bodies of this description, and require to be expelled. The eschars of the skin and cellular tissue do not become detached till the end of seven or eight days; those of the tendinous parts not till somewhat later. The openings should accordingly be kept open during a sufficient length of time to permit their discharge; if they be not, the inclosed eschars will produce abundance of purulent inflammation,

the matter of which can only escape by a rupture of the surface.

Wounds of the cranium, the chest, or the pelvis, generally involve the organs contained in those cavities. Balls may have penetrated into the bones of the pelvis as into the extremities of the long bones, or between the two tables of the skull: these must by all means be extracted; and if the extraction cannot be effected by the usual means, measures must be taken to prevent the accumulation of pus in the cavity and consequent compression of the brain, by applying the trephine, and removing the fragments of bone by elevators.

Amputation, in what circumstances, at what period, and after what manner, to be performed.

This is the next subject to be considered, after having treated of those gun-shot wounds which are managed *without* amputation; and M. Dupuytren further proposes to discuss the after-treatment, and the propriety of healing in those cases by the first intention.

All wounds produced by cannon or other heavy shot, in which a limb has been either completely carried off, or only remains connected by slight attachments, require amputation; for we have to deal with an uneven, lacerated wound—the parts mortified—the bones projecting; a wound, in fact, that could not possibly get well but by a tedious curative process, and even then with an unsightly cicatrice. The effect of amputation would be to substitute for such a wound one that was uniform and regular, and situated in parts possessed of sufficient vital energy to sustain a proper degree of inflammation, with moderate and laudable suppuration; besides, the ruggedness and projection of the bones would be removed by the same means. But there are some exceptions to the general rule. Suppose a ball to carry away the arm near the articulation of the shoulder, or at that very place, and suppose it were to carry away at the same time the acromion or the coracoid process, or the spine of the scapula, how would amputation be practicable in this case? Or imagine the thigh shot off very near, or at the coxofemoral articulation, should the operation be here attempted? Certainly not. We have, therefore, two instances at least in which it is clearly contra-indicated. The plan to be pursued in such cases as

these, is to disengage the wound from all foreign bodies—from every projection of bone; if there be hæmorrhage, to arrest it—if not, to provide against it; and it will be prudent as well as consistent with the rules of art, to tie the arterial trunk an inch, or an inch and a half, above the seat of the injury.

These precautions, however, will not meet all the severity of the danger of the wounds in question. The danger is owing, 1. to the commotion or shock that the system receives, and which is often followed by the death of the individual; 2. to the heavy expense the system suffers from the inflammation and suppuration of so extensive an injury, even after it has been relieved from the foreign bodies and other inconveniences; 3. to the heavy draft made on the system by the formation of the cicatrice, supposing the patient to escape the danger so far; 4. and lastly, to the probable existence of internal inflammation, which is both a frequent and formidable occurrence.

Most authors consider amputation as indispensable where the great vessels have been divided; M. Dupuytren will not venture to be so positive as to the general expediency of the measure. If the shot has struck the middle and inner portion of the thigh and opened the femoral artery, an effort should be made to save the limb by tying the vessel; and although a single ligature *may* suffice, it is advisable to employ two, one for each extremity, applying pressure at the crural arch, and opening the wound half above and half below the external injury; first the upper extremity of the vessel should be tied, then the lower. The Professor has seen many instances of the success of this method in cases of comminutive fracture, without external wound. In one case of fracture, with aneurism of the anterior tibial artery, ligature of the femoral has succeeded. When the injury of the artery is accompanied by an open wound, the matter is more serious. The plan then is, when the artery alone has been injured, to apply a ligature; when the artery has been injured with slight injury to the bones, ligature also; but when the bone has been more seriously injured, and comminutive fracture is ascertained, amputation must be had recourse to. Injury of the principal nerves does not involve the necessity of amputation;

and we may properly inquire which are the nerves most likely to be injured? The radial? There are certain motions still subsisting in the wrist, and the preservation of the hand will save the patient from the dangers of the operation. The median? he escapes with a continual retraction and paralysis of the part. The brachial flexus can scarcely be supposed capable of being injured without simultaneous injury of the vessels; but if otherwise, it will still be better to save the limb for the patient, though it be of little use to him, than to expose him to the danger of having it cut off. Nor will even the injury of the sciatic nerve justify amputation: though its complete division induces paralysis of the whole limb, yet the danger of amputating the thigh is so great that we can never repent the dispensing with it, if it be possible. But if both nerves and principal vessels be injured together, and the injury be properly ascertained (a thing difficult enough to do), there can be no room for hesitation; amputation must be practised; for a limb without nutriment and without sensibility cannot possibly live, and gangrene threatens a danger more serious than amputation itself. There can be no question about the propriety of amputation when a limb is broken by a ball that has struck it in rebound, the bone and soft parts being mashed *en bouillie*, without lesion of the integuments. By amputation, too, the wounded patient escapes the danger of the sinking state that succeeds the commotion and prepares the way for mortification; and he may also escape gangrene. If a heavy shot have carried away a great quantity of the fleshy parts, the vessels and principal nerves, the operation is clearly indicated. If one of the long bones be broken comminutively towards the centre (we speak not now of the articulations), none of the soft parts being carried away, must we sacrifice or save the limb? The general rule is this: if the bone be fractured in one or two points only, and there be but few splinters, leaving the vessels and nerves untouched, and little disturbance in the soft parts, we should dilate the wound, and try to save the limb by all means; but if there be abundance of splinter, and disorganization of the nerves and vessels—amputation. There have been instances, no doubt, of patients obstinately refusing to have

their limbs removed, and yet getting well; but these are merely exceptions, and were it possible to summon from their graves all who fell victims to their obstinacy, it would be seen that the proportion is about ninety-nine to one, or something very considerable.

In military practice, the necessity for amputation most frequently occurs.

In an hospital indeed, if the case be not very desperate, a cure may be attempted without having recourse to amputation, but on a field of battle circumstances are very different.

Patients who sink under those wounds, die of hæmorrhage, primary or secondary; or more frequently of excessive suppuration, sweating, or colliquative diarrhoea; and the event takes place about the twentieth, thirtieth, or fortieth day. The latter has been the usual period in numerous cases which occurred in the *Hôtel Dieu*. Those who have been so fortunate as to get well without amputation, have escaped death only by hazarding the most imminent dangers. They have inflammation, suppuration, the opening of abscesses, the extracting of splinters, sweats, colliquative diarrhoeas, and such like, to go through; and with all this, even after the cure, they find themselves possessed of a shortened limb, and unsightly callus, puckered and contracted cicatrices; and, in short, they have saved a member that is scarcely of any use to them.

When the wound involves an articulation—but one of no great importance—as a foreign joint, or the wrist, or the instep, a cure may be effected without amputation. But if a crepitus be perceived, with a copious flow of a blackish blood, amputation must be performed at or above the articulation. The probe, however, is not to be depended upon as the best means of ascertaining the state of the bones; one or two splinters meet that instrument as if there were twenty. The plan to be pursued is, to enlarge the openings freely, so that the finger may be employed to explore the condition of the injured part; then if the bones be found mashed *en bouillie*, we should not hesitate to remove the joint. In a case in which the head of the humerus was reduced to this deplorable condition, and the patient obstinately refused to have the part amputated, no less than sixty pieces of bone were extracted, and when at last disarticulation was

effected, the head of the humerus was found to have entirely disappeared.

Whenever amputation is decided upon as necessary, it should be performed without delay. By this means, the wound and the operation are blended into one mishap in the mind of the patient; the sacrifice is less painful; hopes have not been formed of the possibility of saving the limb; both the moral and physical effects of the injury, of the loss of the part, and of the operation, are confounded into one and the same calamity. The patient, on the other hand, who has been permitted to indulge in the hope of preserving his limb, suffers doubly in the sacrifice which he has subsequently to make. Had it been amputated in the first instance, there would have been courage, hope, and strength to bear up against the loss; but when suffered to be deferred, it is borne with dejection, discouragement, feebleness, and exhaustion. Doubtful cases, however, there certainly are, in which no human sagacity nor experience can anticipate the result—cases, for instance, in which immediate amputation saves the patient from consecutive hæmorrhage; from internal inflammation, which is of frequent occurrence with debilitated subjects, who are easily affected by currents of air, or changes of diet, or the suppression of a discharge to which they had been habituated; but it deprives them for ever of a useful member that might probably have been saved. Had the operation been deferred for a time, it might perhaps be the means of saving the limb; but the delay exposes the patient to the chance of death from the primary injury, or from the greater danger that results from the train of consequences which we have just now enumerated.

It is unnecessary to enter into any detailed statement of the various modes of performing the operation, which indeed are capable of infinite variety, according to the nature of the wounds. It may, however, be mentioned, that if the member affected have but one bone, the operation may be abridged by incising the muscles at once down to the bone, and then with a second cut severing the whole of the deep-seated muscles (M. Dupuytren's process); and it should be an object to save as much flesh as possible. In amputations of the fore-arm and the leg, the methods of proceeding

vary as the wounds are different. Sometimes flaps are naturally formed in certain parts, and this should not be forgotten in the process.

A question of more importance now presents itself. Should we have recourse to union by the first intention? I have been a long time, said M. Dupuytren, in the habit of expressing myself unreservedly on this point; and if I have not been understood, it is because certain persons have not wished to understand me.

When amputation has been performed for a gun-shot or an incised wound, or for a sudden accident, such as a fall, or a crush, union by the first intention should be had recourse to forthwith, for there is nothing to contra indicate it: the subject is not debilitated, the constitution has contracted no habit of excessive suppuration which it would be dangerous to suppress all of a sudden. A gently compressing bandage, some straps of adhesive plaister, and, in some very rare cases, a few stitches, are all the treatment that is required. I have never thought suture necessary in amputation of the limbs; had I ever seen the least necessity for it I should have employed it, as I should be sorry to be the slave of methods or of prejudices. The state of the bandages is to be looked to: they must be made tight again, if they grow loose—and loosened a little if they be too tight: the straps must be renewed without disturbing the parts; the ligatures must be examined, and one of their tails preserved, so as not to leave the knot entirely buried in the wound. Those knots are foreign bodies—very rarely absorbed; they form nuclei for the gathering of pus, and produce swelling of the parts until the pus is discharged by artificial means, or has made itself a passage, and carried away the knots with it.

But is union by the first intention ever literally effected?—Never. I have questioned the advocates of the practice, and after driving them from one shift to another, have obliged them to confess that a certain quantity of suppuration, more or less, did form during fifteen, twenty, or thirty days, even in the most successful cases, and this is exactly what I have myself constantly observed. It is, however, by no means to be inferred that the method is not advisable; it is useful, inasmuch as

it diminishes the extent of the wound, and the abundance of the suppuration, and shortens the period of cure. But we are bound also to state what are the disadvantages of the method in question. It makes imperative the necessity of tying even the smallest vessels; but how carefully soever this is done, it can scarcely be ever ascertained that no artery has escaped, and consequently there is nothing certainly known about the probable occurrence of hæmorrhage, primitive or consecutive. If hæmorrhage do occur, the condition of things is worse than under other treatment: the infusion and infiltration of the blood destroys the force of cohesion of the parts; the searching after the bleeding vessel is attended with great difficulty, and it is often impossible to find it. The infiltrated blood gives rise to inflammation, to abundant suppuration of a bad kind; to shiverings, fever, and danger.

When we do not attempt union by the first intention, and the patient is weakened by a constant suppuration, which it would be dangerous to put a stop to suddenly, you are not to suppose that we always stuff the wound with charpie: our practice is to draw the flesh into a narrower compass, and then to lay charpie upon it, with a bandage, and so forth.

RUPTURE OF THE UTERUS.

To the Editor of the London Medical Gazette.

SIR,

I HAVE to thank your correspondent, Mr. Harvey, for the opportunity he has afforded me of amending my report of the case of ruptured uterus, published in your Gazette of the 2d inst.; an omission in which, from anxiety to condense my statement into as narrow a space as possible, I am aware may have rendered it rather obscure.

Mr. Harvey "cannot reconcile the rigid state of the os uteri," with the "symptoms of general relaxation," described in Mrs. Cuthbert's case. That the os uteri felt rigid, and that it was no more pervious to my first touch than I stated, is nevertheless most true. I attributed it to the remains of an ex-

traordinary state of spasm*, and certainly any thing but confirmatory of the midwife's protestations of having felt the head of the child at the orificium externum. I have seen symptoms of "general relaxation" in *hysteralgia*, and yet I knew all the while that the patient's sufferings were caused by violent spasm of the uterus. The discrepancy in my report was, as Mr. Harvey liberally gives me credit for, certainly caused by an omission. I should have stated that the rigidity yielded to the gradual introduction of the hand; an inference which I too readily took for granted would be made, from my stating that I "passed my hand to the right side of the cervix," where I found "the commencement of the rupture."

Respecting Mr. Harvey's remarks on the difficult extraction of the head of the child, I only wish that he had been present, to have given us a practical proof that he could have "finished all with little trouble." We found a great deal of trouble in "finishing all;" and, by the way, I should not wonder that Mr. Harvey, when he penned these remarks, had forgotten what I said about the pelvis being of "contracted dimensions."

I cannot guess what further objection your correspondent may have *in petto* about the protrusion of the intestines; but I think he can hardly mean to deny that the intestines might possibly protrude under such circumstances.

Assuring Mr. Harvey that so far from feeling offended, I accept with perfect good will his candid and judicious observations, I am, Sir,

Your most obedient servant,

P. MACINTYRE.

Bury St. Edmunds,
Oct. 20, 1830.

METHOD OF CLEANING BONES.

To the Editor of the London Medical Gazette.

SIR,

SHOULD you consider the following observations on the efficacy of the chloride

* I have good authority for believing that such a state of spasm may exist. Dr. John Burns, in his *Principles of Midwifery*, p. 462, speaks of the uterus being "violently and spasmodically contracted between the *vent* and the *os uteri* of the fundus he lacerated."

of lime and subcarbonate of potash in rendering bones perfectly white, and void of the unpleasant odour generally issuing from them, worthy a place in your widely circulated Journal, you will oblige

Your obedient servant,

J. W. WEST.

Northampton, 21st Oct. 1830.

From some accidental circumstance which lately occurred to me, I was induced to give trial to a combination of the chloride of lime and subcarbonate of potash, in the proportion of one pound of the former to one ounce of the latter, added to two gallons of water, for the purpose of cleaning bones, and found it far exceed my expectations, inasmuch as it rendered a cranium perfectly white after having been in the solution not more than twenty-four hours.

To those of the medical profession who are in the habit of preparing bones for museums, &c. I can recommend it as the most successful means I have ever used.

CASE OF EXTENSIVE DISEASE OF THE KIDNEY AND BLADDER.

To the Editor of the London Medical Gazette.

SIR,

IF the following case should appear to you as interesting as it does to me, I will thank you to give it publicity through the medium of your useful journal.—I am, Sir,

Your obedient servant,

F. SMITH, M.D.

Stains, Oct. 7, 1830.

Mr. D., aged 65, complained, in the beginning of August, of frequent desire to make water, and of a dull aching sensation at the extremity of the penis after the urine had been voided, which was frequently tinged with blood. He was also generally costive, and was troubled with tenesmus, frequent rigors, pain about the left kidney, and some tenderness in the hypogastric region.

On examination, a hard immoveable tumor was perceptible, extending from the false ribs of the left side to the iliac fossa. Mr. D. had frequently passed gravel and small calculi; and for three

or four years had experienced more or less uneasiness in the loins. His appetite, however, was mostly good, and he was free from all tendency to nausea and sickness.

From the severity of his suffering and the interruption of his sleep, he latterly lost flesh and strength rapidly; and about a month before his death, he voided with his urine a considerable quantity of blood and purulent matter. He lingered on till the 11th of September, when he died; and on the following day the body was examined.

On opening the cavity of the abdomen, strong adhesions of the peritoneum to the viscera were found on the left side, and a large elastic tumor presented itself, situated in the left hypochondrium and flank. At first the swelling was supposed to be a disease of the descending colon; but after the mass which adhered intimately to the parietes of the abdomen had been dissected out and opened, about three pints of fluid pus escaped from the kind of pouch which it constituted, and which appeared to be, in reality, the capsule of the kidney enormously dilated. The parietes of the sac varied in thickness from that of a shilling to that of half an inch. The substance of the kidney itself was completely destroyed.

The left ureter was much thickened. The right kidney, which must have performed the functions of both, was of the natural size, and quite healthy. The bladder was contracted; the fibres of its muscular coat were thickened; its internal coat was in a state of ulceration, and a good deal of concrete pus was found in its cavity. The prostate gland was but little enlarged, though it included within its substance a small abscess. The other viscera were healthy.

From the history of the disease, it was suspected that the patient laboured under a complication of complaints—probably organic disease of the left kidney, induration and thickening of the descending colon, chronic inflammation of the bladder, and disease of the prostate gland. As he had voided gravel, and some of his symptoms resembled those of stone, he was soundly by Mr. Samuel Cooper, of London, and Mr. Baker, surgeon, of this town; but no calculus could be felt. However, shortly after this operation, the existence of an abscess that communicated with the bladder became manifest, from

the sudden commencement of the profuse discharge of bloody matter with the urine. This case cannot fail to be interesting both to the practitioner and pathologist; for it affords a striking example of a total disorganization of the kidney, accompanied by a great deal of disease in the bladder, while the functions of the stomach continued quite unimpaired to the last. In fact, during the whole of Mr. D.'s sufferings he never complained of nausea, and never vomited; and always had a good appetite. The nature of the swelling in the course of the descending colon, seemed particularly obscure; and had not the body been examined after death, no suspicion would have been entertained that it arose from a large collection of matter in the capsule of the left kidney, which organ itself had been entirely destroyed.

ANSWER TO DR. GRANVILLE'S REMARKS ON DR. GOOCH AND HIS BIOGRAPHERS.

*To the Editor of the London Medical
Gazette.*

SIR,

As a friend of the late Dr. Gooch, I take the liberty of requesting your insertion of the following brief reply to Dr. Granville's letter in your last number. The author of the memoir which is so offensive to Dr. Granville, is called upon to recal his assertion that "Dr. Gooch settled the question of the contagious nature of the plague, at least for the present generation;" and is probably expected, in any future edition of the Family Library, to ascribe that merit to Dr. Granville. Whoever the writer of the Life of Dr. Gooch may be, he will probably not lightly be induced to qualify the statement he advisedly made. He will see that the whole of Dr. Granville's argument is founded upon the fallacy of considering a decision of the House of Commons an infallible proof of the settlement of a disputed question; an opinion which no man, either in or out of parliament, except Dr. Granville, would attempt to maintain. Just as reasonably might it be asserted that the question of Catholic emancipation was set at rest ten years ago, or that of the quarantine laws by the report of the Committee of

1819. It is much more credible that the present state of public opinion, respecting the contagious nature of the plague, is to be attributed to an admirable exposition of all the arguments and facts on which the question hinges, circulated through the medium of the *Quarterly Review*, than to any vote of the House of Commons: and here the author of *Dr. Gooch's Life* will probably leave his share of the controversy in which Dr. Granville is so anxious to engage. It may, however, be allowable to one who takes an interest in the fair fame of Dr. Gooch, to examine the relative share which that gentleman and Dr. Granville had in promoting the decision of the House of Commons. It should seem that Dr. Granville was examined by the Committee, in 1819, and that he wrote a letter to the President of the Board of Trade, which was extensively circulated by himself. No doubt this was very praise-worthy, and Dr. Granville took the right side of the question: but it so happened that all his excellent arguments were soon forgotten, and, in 1824 and 1825, the anti-contagionists were again in the field, and a committee again appointed to investigate the same subject, and a minister of the crown (Mr. Huskisson) had upon his own responsibility suspended the operation of the quarantine laws at Liverpool. Up to that time, then, Dr. Granville had not succeeded in satisfying the public mind. But, says the Doctor, with an air of triumph, the article in the *Quarterly Review* did not appear till December 1825, and the House of Commons decided not to relax the quarantine laws in the June preceding: he cannot, therefore, conceive what share Dr. Gooch can have had in promoting this decision, as it is quite inexplicable that he should have communicated with his Majesty's ministers.

Dr. Granville professes to have read the life of Dr. Gooch, and yet he does not choose to remember a letter printed in that life, and dated April 1825, in which Dr. Gooch states that he had put into Mr. Peel's hands the evidence he had collected on the subject, in order, as he says, to stay the mischief. Dr. Gooch was the medical adviser of Mr. Peel's family, and however inexplicable it may appear to Dr. Granville, it will be so to no one else, that the Minister for the Home Department should have

consulted his confidential physician on this important subject, and been mainly influenced by him.

There is only one point more worthy of notice in Dr. Granville's attack upon Dr. Gooch. The latter is stated not to have been deemed a competent witness to be examined before the House of Commons. What! are all the eminent physicians of London, whose names do not appear in the list of persons examined by the Committee, to be deemed incompetent? Dr. Granville treads upon tender ground: he must know how easy it is for any man, who is ambitious of seeing his name in the newspapers, to prevail upon some good-natured or ill-natured member of parliament to procure his examination. He must also know how much reason some persons have to regret that they ever volunteered to give evidence. Dr. Gooch was a man who loved to do good quietly, and a despiser of noisy conspicuity. A. M.

October 25, 1830.

OBSERVATIONS

ON THE

EMPLOYMENT OF LARGE DOSES OF IPECACUANHA IN DYSENTERY,

Without exciting Vomiting.

BY W. TWINING, Esq.

IN venturing to solicit the attention of the profession to the subject now proposed, I do not wish to uphold any exclusive plan of treatment, nor do I look on one remedy as a certain cure for every stage of dysentery. Admitting freely the general principles which direct us in the employment of venesection and corresponding remedies in the early or inflammatory stage, as well as a suitable treatment for the hepatic or other visceral disorders often connected with dysentery, especially when it attacks persons long resident in India, I could, without deviating from those principles, most strongly recommend the employment of ipecacuanha in very large doses, for the purpose of relieving tenesmus and irritation, restoring a healthy state of the alvine evacuations, and, in more remote stages of the disease, promoting the healing of intestinal ulcers.

To fulfil these intentions, the powder-

ed ipecacuanha has been exhibited combined with a bitter extract, whereby vomiting is counteracted. I have generally used the extract of gentian for this purpose, and by prescribing these two remedies in nearly equal proportions, we may, if requisite, give from six to twelve grains of ipecacuanha without often exciting nausea.

The quantity in which many medicines are taken, determines not only the intensity or quantum of effect, but the mode of action; and the organs and functions on which those actions are directed. This seems particularly the case with ipecacuanha, and the observations at present made induce me to believe, that the most effectual dose of this medicine, when intended to act as an anti-dysenteric, is six grains for an adult: larger doses sometimes produce general uneasiness, and have not been often employed by me in dysentery.

The success of administering ipecacuanha combined with extract of gentian, has been so satisfactory in the greater number of common cases of acute dysentery in which they have been tried (after suitable evacuations), that I am willing to bring forward the results without farther delay; claiming no more confidence for the present examples than their number and the nature of the cases may demand; while I observe, that they are only a small proportion of those treated by the same means with similar success, and to the satisfaction of other medical men who saw them.

Ipecacuanha has been so long employed in the cure of intestinal profluvia, that its utility in alleviating some of the symptoms attending those diseases seems, to a certain extent, acknowledged; but the mode in which it is generally exhibited would leave room to believe that no great reliance has been of late years placed in this remedy, although it was originally introduced to the notice of the profession in Europe as a medicine of the greatest efficacy in the cure of dysentery. A reference to the history of the remedy may satisfy us that it has been held in estimation in the cure of that disease, just in proportion as it was administered in large doses; and it was formerly sometimes so prepared by boiling, that the emetic properties of the root were obviated: whereas when given in small doses, it has been considered of less efficacy, and in severe cases is now generally looked

on as an adjuvant of minor importance, the benefit appearing to belong in great measure to the other remedies with which it is combined.

A great variety of trials have satisfied me that the praises formerly bestowed on large doses of ipecacuanha as an anti-dysenteric are, in many instances, founded on the justest grounds; and the remedy appears advisable in the early stage of almost all ordinary cases of acute dysentery; in the treatment of which the first object (after adequate bleeding) is to clear out the bowels by a dose of castor oil: twelve hours after this has operated freely, the patient should take six grains of powder of ipecacuanha, with four grains of extract of gentian, and five grains of pil. hydrarg. in three pills, which are to be repeated every night at bed-time, and at day-light in the morning: a dose of compound powder of jalap (dr. i.) is given daily at eleven o'clock in the forenoon, but if the patient be of a very irritable habit dr. $\frac{1}{2}$ will be sufficient for a dose.

By these means we may soon procure a cessation of all the distressing symptoms, and it is then sufficient to continue six grains of ipecacuanha, with four grains of extract of gentian, every night, giving a smaller dose of compound powder of jalap, or a moderate dose of castor oil, every morning, for four or five days more. The above treatment generally produces a restoration of a natural state of the alvine evacuations so quickly, that patients are with difficulty restrained from using an improper quantity of food in the early stage of convalescence, when, although the evacuations from the bowels may be in a regular and natural state, the intestines must remain weak, ready to be irritated by slight causes, and incapable of digesting any thing but the most bland food. During the treatment now detailed, great attention is requisite to the quantity of food used, as well as its quality. Not more than six ounces of food and drink together should be taken at one time, nor should this quantity be repeated oftener than is absolutely requisite to prevent the patient from sinking; in severe acute cases, half this quantity should not be exceeded. By thus strictly attending to the quantity of food and drink used, it is probable that the ingesta will be almost entirely absorbed in the upper portions of the

small intestines; so that the colon, which is the seat of dysentery, may be as nearly as possible empty while in an irritable state, and during the subsidence of disease, or the healing of ulcers. Bread and tea, or milk and sago, are the most proper, to which soups in limited quantity may be added during the progress of recovery; solid food of any sort, except bread, not being allowed, until convalescence is far advanced. Should thirst be urgent, the patient may drink oz. ii. of cold camomile tea, but ought not to repeat this oftener than once in an hour, however urgently required: it is the best drink that can be used, and does not increase thirst.

When this plan of medicine and diet is followed, the ipecacuanha seldom produces vomiting; but a healthy state of the bowels is speedily restored. In a few cases, six grains of ipecacuanha combined with gentian, have caused vomiting; but this circumstance has been exceedingly rare, and it has often happened that patients were not sensible they had taken medicine possessing nauseating qualities. In more than one instance medical men were subject to the same treatment for dysentery, and expected that half the quantity of medicine taken would make them vomit, still they experienced no such effect; being equally surprised at the exemption from vomiting, and the early and complete relief from suffering and dysenteric symptoms which the remedy effected. Twelve grains of ipecacuanha have been often given to adults combined with eight grains of extract of gentian, in four pills, without exciting vomiting; and half that quantity has been taken by a child thirteen years of age without causing nausea. I have never known five grains of ipecacuanha combined with the same quantity of gentian in pills, nauseate an adult. Some persons who were watching the effects of these large doses, expressed doubts as to the quality of the ipecacuanha in use at the General Hospital; therefore, for the purpose of removing any chance of fallacy on this point, three grains of the medicine from the same bottle were given without the gentian, and it produced free vomiting. This was repeated several times, so as entirely to satisfy those who attended to the experiment. Some other combinations of the same remedy produce a

similar effect, appearing to divert the action of ipecacuanha from the stomach and to direct it towards other organs; as is well known to be the case when a moderate dose of jalap is given with as much ipecacuanha as would alone excite vomiting, instead of which the combination acts as a mild and satisfactory purge; this effect is rendered more certain if a small quantity of cream of tartar or other vegetable acid, be added. A consideration of these established facts might induce us to try other combinations for the same purpose, when gentian is not procurable. It is of importance that the extract of gentian be not burnt, or otherwise impaired in quality, for then it will not have the desired effect in preventing vomiting.

In many of the slighter cases of dysentery, ipecacuanha and gentian may be given night and morning, without the blue pill, a small dose of compound powder of jalap being ordered daily at noon; but it has appeared to me that the efficacy of the other remedies is very much increased by the blue pill.

The first effects of ipecacuanha given in ordinary cases of acute dysentery, as above directed, are generally a slight increase in the secretions from the bowels, the evacuations becoming more copious and feculent; pain and tenesmus are abated, while the quantity of blood and slime immediately decrease and soon disappear altogether. At the same time I have frequently observed that a change takes place in the specific gravity of the feculence voided; a sediment appearing at the bottom of more fluid stools. This sediment is frequently a light grey powder resembling bran; occasionally it is more dense, like pounded slate; and sometimes, though rarely, it is of dark brown colour, and in small lumps like split pease. Similar appearances are sometimes seen in the evacuations of dysenteric patients who are recovering under a daily employment of purging by pulv. jalap. comp. The appearance just noticed almost invariably indicates that a favourable change is about to follow, and it seems to denote that the coats of the intestines are prepared to assume healthy secretions. When this appearance is observed, unattended with blood, and the patient is free from pyrexia or pain on pressing the belly, we may give smaller doses of ipecacuanha and gentian, with blue pill, at bed-time, and go on with

some mild purgative every morning, being at the same time most cautious in allowing any increase of diet.

If the above treatment be steadily pursued for a few days, scarcely any other medicine will be requisite in most cases which apply in an early stage of the disease. At the same time I most strenuously urge the necessity of a free use of the lancet, and repeated bleeding by leeches, in all recent cases of dysentery, when there is either pyrexia, morbid sensibility of the belly on pressure, evacuation of blood with the stools, or tenesmus. But when repeated bleedings have accomplished all that can be wished from them, ipecacuanha, with the other medicines above stated, will be found of infinite service in soothing irritability, and restoring a healthy state of the bowels. I need not add, that tepid baths, fomentations, and poultices over leech-bites while they are still bleeding, are useful. Where the free use of calomel has been chiefly relied on, and employed to salivate, in some instances a purging and tenesmus have still continued, and in these the combination of ipecacuanha and gentian has then been employed with the most happy results. Opiates have generally appeared injurious in dysentery, except when given with calomel, so as to cause that medicine to be retained in the first portion of the intestines, while it may act on the secretions of the duodenum and liver. The treatment now proposed has appeared more remarkably effectual during the rainy season in Bengal, when dysentery is most prevalent, and when the functions of the skin are liable to be much influenced by the damp atmosphere, as well as by the sudden alternations of temperature. However, I did not observe that the good effects of the medicine were connected generally with any perceptible influence as a diaphoretic.

My observations on the effects of large doses of ipecacuanha, being the result of practice in the lower provinces of Bengal, I can only speak of the remedy in this climate, and my first wishes will be gratified if the same results attend its employment in other places. I allude particularly to the drier atmosphere of upper India, and the hot dry climate of Madras; for the forms and terminations of diseases, as well as the effects of medicines, are so much modified by climate and situation, that

the test of experiment is requisite before we can place much confidence in this remedy when used under different circumstances, although it has been employed here with remarkable success.

In forming a due estimate of the value of any plan of treatment employed in the wards of a public institution, we must bear in mind the habits of such patients as are sent to an hospital; for it is probable that in some of them disease has been aggravated by improper diet, and all sorts of imprudence; and that a remarkable change in the symptoms would take place from the regular habits and diet of the hospital, independent of medicine. I have endeavoured to select cases as little as possible under the influence of such causes, and where the recovery could with strict propriety be ascribed to the medical treatment. Several of the subjects of the following observations were not hospital patients.

CASE I.—Robert Sharp, ætat. 25, admitted 30th November 1827. A slight made man of light complexion, about two months in India, and known to be of sober habits. Has been suffering from dysentery eight days; passes much blood with very small quantities of yellow feculence; goes to stool ten times an hour through the day and night; there is little pyrexia; pressure on the belly gives pain.

Apply 20 leeches to the belly, and use the tepid bath. To wear a flannel dress.

R. Pulv. Jalap. C. 3ss.

Dec. 1st.—Was at stool every five minutes during the day, but less frequently in the night; stools scanty and mixed with blood; the last evacuations this morning consist of only a little fluid blood and water; no pyrexia; skin dry, very little pain on pressing the belly, and no griping.

Pulv. Ipecac. gr. vi.

Extract. Gentian. gr. iv.

Pil. Hydrag. gr. v. in three pills now, and repeated at bed-time.

P. Jalap. C. 5j. at noon.

Tepid bath.

2d.—Had about a dozen stools in twenty-four hours; no pain; had nausea and vomiting after the last dose of pills; skin soft, but there is very little sensible perspiration.

Pulv. Ipecacuanha, gr. iij.

Extract. Gentian. gr. ij.

Pil. Hydrag. gr. v. in two pills in the morning, and repeated at night.

Pulv. Jalap. C. ʒss. at noon.

3d.—Four natural stools in twenty-four hours; he has no pain, and passed no blood.

To take half an ounce of castor oil.

Vesper.—Had many loose stools after the oil.

To take 3 grs. of ipecacuanha and 2 grs. of extract of gentian, in a pill.

4th.—Had no stool in the night; three free stools this morning.

Repeat the pills at bed-time, as last night.

5th.—Had three stools yesterday, but was not up all night; two stools this morning; the last is figured.

Ext. Colocynth. C. Pil. Hydrag. aa. gr. ij. in a pill.

6th.—Three stools, free from pain or pyrexia.

No medicine.

8th.—Discharged.

CASE II.—Ursin L'Abbe, ætat. 21, a Frenchman, of delicate constitution and slight make, steward of the ship *Epide*; of temperate habits and good character; arrived in this river six or seven weeks; has been living on board ship, and very seldom on shore. Admitted 22d Jan. 1827, having been ill for six weeks with dysentery; has a dozen stools in 24 hours, mixed with blood, and attended with some straining. Belly rather hard, and there is morbid sensibility on pressure.

Ordered—Castor Oil, ʒi. Ten leeches to the belly, and tepid bath afterwards.

This patient took Pulv. Ipecac. gr. vi. Extract. Gentian. gr. iv. in two pills, every night from the 22d to the 29th January, and some castor oil or rhubarb daily in the morning.

29th.—Two stools in twenty-four hours, and he felt well; the evacuations were of a dark bilious colour; he was therefore ordered Calomel. Extract. Colocynth. C. each five grains, in the morning, and castor oil at noon, which treatment was repeated the next day, and operated freely. Nine grains of Ipecacuanha and six of Extract of Gentian were given in three pills every night at bed-time until the 3d February, when his bowels were regular, and being in

all respects quite well, he returned to his duty on board ship.

CASE III.—A gentleman of dark complexion and stout make, 26 years of age and two years in India, of most regular and temperate habits, was affected with dysentery in the latter end of March 1827. The disease commenced as a common purging, which rapidly increased, and in four days he passed scarcely any thing by stool except blood and mucus; he had restlessness and anxiety, with little pyrexia; there was some thirst, with a white tongue, and total loss of appetite. He suffered much pain in the ascending colon and sigmoid flexure, and there was morbid sensibility on pressing over the course of the colon. The desire to go to stool was so incessant as to deprive him in great measure of rest at night. For four days he kept very quiet, used mild aperients, and observed a very spare diet; but the disease became worse daily.

On the 28th March he was in a state of miserable irritation, with tenesmus, and purging of blood and slime.

I was then requested to prescribe for him, and ordered

Pil. Hyd. Pulv. Ipecac. Ext. Gentian. aa. gr. v. night and morning. And

P. Jalap. gr. xx. Potass. Supertart. gr. xlv. T. Sennæ, ʒi. Aquæ Anethi. ʒiiss. daily at 11 o'clock.

He was much better next day, less frequently at stool, and passed less slime and blood; the medicine had not produced nausea.

31st.—Slept; irritation and frequency of purging much abated.

Ordered—P. Ipecac. gr. vi. Ext. Gentian. gr. iv. every night at bed time, and the purgative early in the morning.

On the 4th April his bowels were quite regular, and medicine omitted. During this treatment a very spare diet was used. This patient had suffered a dreadful attack of dysentery in August and September 1825: he was then treated according to the usual course of evacuants and calomel to salivate, by which he was reduced to the lowest degree of debility, and his life was only saved by a voyage to sea. He considered the second attack much of the same description as the early stage of his former illness, and ascribed his recovery entirely to the ipecacuanha and gentian.

MR. JEWEL'S EVIDENCE ON THE
LATE INQUEST AT HAMPTON.

*To the Editor of the London Medical
Gazette.*

SIR,

IT is not my intention to reply to the tissue of abuse and silly questions which have appeared in the pages of the *Lancet*, respecting the evidence given by me at the late coroner's inquest at Hampton, although I feel it necessary, through some respectable medium, to offer a few brief remarks upon the subject.

As to the nature of the presentation, the evidence of the gentleman whose professional conduct formed the object of inquiry, was not deemed requisite by the coroner, and I had no means of forming an opinion upon the case as it had exactly occurred but by viewing the position of the child when the body of the mother was examined upon the tombstone in the churchyard. So far from it appearing to be a face presentation, the right shoulder was wedged in the pelvis, the side of the chin rested upon the pubes a little to the right, whilst the occiput was directed to the right sacro-iliac symphysis. The immediate impression on my mind was, that the arm or shoulder must have presented. I need not say to those well acquainted with the principles of midwifery, that in many cases of this kind, when the liquor amnii has been evacuated for a considerable period, when the child, unusually large, is in a state of putridity, and when the uterus has contracted firmly round the child, the arm may be removed, the thorax perforated, and the spine or pelvis of the infant brought down in imitation of the spontaneous evolution, with the greatest possible advantage.

Permit me to remark that the manner in which the investigation was conducted, reflects but little credit upon the taste of some of the parties concerned; the result, however, must have proved satisfactory to every liberal and well-disposed member of our profession. I would also beg permission to add, in answer to a correspondent in the *Lancet*, bearing the signature "Obstetricus," that the gentleman in question had never been my pupil, nor had I the pleasure of his acquaintance until the day of the in-

quest. Trusting that you will give insertion to these few observations,

I remain, Sir,
Your obedient servant,

GEO. JEWEL.

24, Sackville-Street,
Oct. 26, 1830.

ANALYSES & NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Medico-Chirurgical Transactions, published by the Medical and Chirurgical Society of London.

IF we might judge from their "*Transactions*," we should be disposed to judge rather favourably of the present state of the Society:—the volume contains some papers of considerable interest, and a shorter interval has been suffered to elapse between the dates of publication than on some former occasions: we hope, too, as it is has been settled—we believe definitively—that the "*local habitation*" of this institution is not for the present to be changed, the members will exert themselves in the meantime to support its "*name*," and this cannot be efficiently done without the regular appearance of valuable contributions to medical science.

We select for the present occasion a set of cases of aneurism, in which ligatures were applied to various great vessels; and in order to render the series complete, we append to them several cases of a similar description, from the "*Dublin Hospital Reports*."

CASES OF ANEURISM, WITH
OPERATIONS.

Case of Aneurism of the External Iliac Artery, for which the Femoral Artery and subsequently the Aorta were tied.
By J. H. JAMES, Esq. Surgeon to the Devon and Exeter Hospital.

J. W. a man of rather spare habit, but not unhealthy, was admitted into the Devon and Exeter Hospital, May 7, 1829, for disease of the left hip and knee. Had been ill four months; was

lame; had flattened nates; pain of hip and knee, which last was swollen; no tumefaction above or below Ponpart's ligament, but had perceived a swelling at lower part of abdomen about four months before.

Rest and an issue were ordered, under the persuasion that the case was one of hip-joint disease. About the end of the month, however, Mr. James remarked a tumor at the lower part of the belly, just above Poupart's ligament. This was at first imagined to depend on diseased glands; but it increased rapidly, and Mr. Barnes being requested to look at it, ascertained the existence of an aneurism. The tumor did not pulsate, but when firmly pressed, it was emptied of a part of its contents, and the pressure being removed, the blood returned with throbbing; no pulsation was perceptible in the groin or ham. The nature of the tumor was still farther manifested by the application of the stethoscope.

The swelling continuing to increase with rapidity, it was determined, on the 2d of June, to try the operation of Brador. The artery was accordingly tied about half an inch below Ponpart's ligament. For a few days he appeared to be going on well, but from the 12th it increased in size, and by the 24th the integuments had become tense and shining, and soon threatened to slough. After due consideration, the expedient of tying the aorta was resolved upon, and thus performed:—

“ Operation for Tying the Aorta.

“ July 5th*.—About half-past three the man was placed on the table, with his shoulders slightly raised, the bowels having been previously thoroughly emptied.

“ I made the incision rather lower than in Sir A. Cooper's case, beginning it an inch above the umbilicus, and continuing it two inches below. I scratched through the linea alba below the umbilicus, and then proceeded to open the peritoneum nearly to the same extent as the external wound. This first part of the operation was somewhat impeded by very copious bleeding from the vessels of the integuments.

“ As soon as the division of the

parietes was effected, the viscera protruded, and the efforts of the poor fellow continuing strong, I soon found myself embarrassed with almost the whole of the bowels; nearly all the colon, and a great part of the small intestines being pushed out, and presently quite distended with flatus, a circumstance frequently remarkable in the operation for strangulated hernia. I found the aorta without difficulty, pulsating strongly, but it was surrounded with dense cellular membrane, and a strong peritoneal covering was likewise interposed between my nail and it.

“ I may remark that even in the dead subject it is sometimes a difficult matter to force the nail and finger between the aorta and the spine; in this case, embarrassed as I was by the coils of intestine, in which my hand was buried, it was particularly so. I enlarged the wound, but it was of little service; to have obtained sufficient room to push aside those inflated intestines would have required an incision of enormous extent; and supposing this made, there would hardly have been a probability of retaining them completely within the abdomen by any mode of suture during the exertions which the patient might make, and which it would probably be impossible to prevent.

“ I endeavoured cautiously to get the point of the aneurismal needle through, and succeeded; but when it reached the other side it broke at the handle, which, in the one I had selected for its curve, was unfortunately of wood. I had little anticipated occasion for so much force. The broken part was so sharp that I was obliged to withdraw it, for fear of injuring the intestines. With some additional difficulty I got my finger, with Weiss's instrument upon it, under the artery; but even after this was effected, it was by no means easy, with the best assistance of my colleagues, to extricate the short needle bearing the ligature, so much did the intestines interfere with every kind of manipulation. When the ligature was underneath, I kept the intestines out of the way with the fingers of both my hands, and placed one of my thumbs on the vessel, whilst Mr. Luscombe drew it, first on my thumb, and then on the artery; by this I prevented any thing from being included, a caution which Sir A. Cooper has particularly dwelt upon. The ligature was then

* There were present at this operation, my colleagues, Dr. Miller, Mr. Luscombe, Mr. Barnes, and Mr. Harris, besides other medical gentlemen of this city.

drawn tight, and the tumor became flaccid; at the same time the patient complained of deadness in the lower extremities. The ligature was cut close.

"From the tension of the muscles and the inflated state of the intestines, they were not easily returned; but when they had been replaced, five needles were passed through the integuments, and the wound having been secured perfectly by the quill suture, large straps and a bandage were added, and the man was put to bed.

"During the operation he suffered very much, and was at times extremely faint; small quantities of brandy and water were therefore given: after which a dose of laudanum in brandy and water. This appeared to revive him, but he complained of great pain in both the lower limbs, which on the aneurismal side soon increased to agony, and although opium was repeatedly given, it did not cease till he died. He also complained of pain in his head, and that light distressed him.

"The temperature of the lower limbs was maintained as much as that of the trunk, but it fell in both, and about seven p.m. the same evening, he expired, complaining as much of the agonizing pain in the leg, (chiefly at the knee), as he had done from the time of the operation."

The aorta was found to have been tied five inches below the inferior mesenteric artery, and eleven above the bifurcation of the common iliacs. It was an inch below the duodenum. The ligature included some very dense cellular membrane and a small vein. The aneurismal tumor was immensely large, filling the whole iliac region; and the bone on which it rested was bare and rough.

A Case of Aneurism of the External Iliac Artery, in which a Ligature was applied to the common Iliac Artery. By PHILIP CRAMPTON, M.D. F.R.S., Surgeon-General to the Forces in Ireland, &c.

Dr. Mott, the enterprising and scientific surgeon of New York, was the first who proposed and practised the operation of tying the common iliac artery. A ligature has recently been placed round that vessel by Dr. Crampton, and this, we believe, constitutes the second instance of the kind on record. The method he adopted was

different from that of Dr. Mott. A soldier, 30 years of age, and previously healthy, was admitted into the hospital July 8, 1828. He had a pulsating tumor which extended from three inches below the crural arch of the right side to within three inches of the umbilicus: it was divided into two portions by a furrow, corresponding to Poupart's ligament. There was also a pulsating tumor about the size of a pullet's egg in the right ham. He had much pain, so as to prevent him from walking, and to disturb his rest. Pulse 110, full; tongue white. Attributed his disease to a fall received in wrestling about four months before. He was bled five times between the 8th and 17th July, and purged, besides taking digitalis. His health was improved, and on the 18th he was deemed in a fit state for the

"*Operation.*—The first incision commenced at the anterior extremity of the last false rib, proceeding directly downwards to the os ilium; it followed the line of the crista ilii, keeping a very little within its inner margin, until it terminated at the superior anterior spinous process of that bone; the incision was therefore chiefly curvilinear, the concavity looking towards the navel. The abdominal muscles were then divided to the extent of about an inch, close to the superior anterior spinous process, down to the peritoneum; into this wound, the fore finger of the left hand was introduced, and passed slowly and cautiously along the line of the crista ilii, separating the peritoneum from the fascia iliaca, the peritoneum touching the fore-part, and the fascia-iliaca the back-part of the finger. A probe-pointed bistoury was now passed along the finger to its extremity, and by raising the heel of the knife, while its point rested firmly on the end of the finger as on a fulcrum, the abdominal muscles were separated from their attachments to the crista ilii by a single stroke. By repeating this manœuvre, the wound was prolonged until sufficient room was obtained to pass down the hand between the peritoneum and the fascia iliaca. Detaching the very slight connexions which these parts have with each other, I was able to raise up the peritoneal sac with its contained intestines on the palm of my hand, from the psoas magnus and iliacus internus muscles, and thus obtain a distinct view of all the important parts beneath; and assuredly a

more striking view has seldom been presented to the eye of the surgeon; the parts were unobscured by a single drop of blood; there lay the great iliac artery, nearly as large as my finger, beating awfully at the rate of 120 in a minute, its yellowish white coat contrasting strongly with the dark blue of the iliac vein, which lay beside it, and seemed nearly double its size; the ureter in its course to the bladder lay like a white tape across the artery, but in the process of separating the peritoneum, it was raised from it with that membrane to which it remained attached. The fulness of the iliac vein seemed to vary from time to time, now appearing to rise above the level of the artery, and now to subside below it. Nothing could be more easy than to pass a ligature round an artery so situated. The fore-finger of the left hand was passed under the artery, which with a little management was easily separated from the vein; and on the finger, (which served as a guide), a common eyed probe, furnished with a ligature of moistened catgut, was passed under the vessel. A surgeon's knot was made in the ligature, and the noose gradually closed, until Mr. Colles, who held his hand pressed upon the tumor, announced that 'all pulsation had ceased!' A second knot was then made, and one end of the ligature cut off short. On examining the vessel after it had been tied, it was found to be full, and throbbing above the ligature, but empty and motionless below it. The external wound was united by three or four points of suture, and supported by long straps of adhesive plaster. The operation was completed in twenty-two minutes; the patient, who was a firm minded man, made no complaint during the operation, not even when the ligature was closed upon the artery. The tumor, immediately after the operation, was diminished nearly one-third, the diminution being confined to the abdominal portion; ten minutes after the operation, the pulse was 96; at 7 p.m. Mr. Stringer finding the pulse full and bounding, took 20 ounces of blood from the arm; at 10 p.m. I found him tranquil, no pain, pulse 88; the limb, with the exception of the toes, warm; sapheua vein full; additional flannel was wrapped round the foot.

"Saturday, 19th.—Had some sleep; no sense of throbbing; pulse 88; toes

warm, but not so warm as those of the left foot; no pain of the abdomen, even on pressure; bowels not open; ordered an ounce of castor-oil, and an enema if necessary.

"Sunday, 20th.—An uneasy night from pain and rumbling in the bowels; no stool; temperature of both limbs equal; five grains of calomel; three hours afterwards an ounce of castor oil, and two drachms of oil of turpentine, opened the bowels at four o'clock, and removed all uneasiness from the abdomen. It was now, just fifty hours after the operation, first observed by Mr. Corr (one of the house-pupils,) that there was an obscure pulsation in the tumor.

"Monday, 21st.—There is decidedly a pulsation in the whole tumor, obvious both to the touch and to the eye, but there is no 'thrill,' as if the contents of the sac were fluid. No pulsation in the femoral artery below the tumor, and none whatever in the aneurism at the ham, which is reduced to half its original bulk. Pulse 88; skin cool; no pain; temperature, as ascertained by repeated trials with the thermometer, at the groin 98°, at the hams 97°, at the ankles 94°, at the ball of the *left* great toe 87°, at the right 88°.

"Tuesday, 22d.—Pulsation still evident, accompanied (in the opinion of some of the observers) with an obscure thrill; tumor not increased; no pain; pulse 86; no pulsation in the ham.

"23d.—No change.

"24th.—Little or no change, unless that the pulsation in the abdominal portion of the tumor is perhaps more distinct. Ordered to be bled (in the erect position) ad deliquium; tincture of digitalis, 20 drops every third hour; fever diet.

"The object of this treatment was to diminish the force of the circulation through the tumor, in the hope that its contents might coagulate. It was plain that from whatever source the blood was derived, it was flowing into the aneurismal sac, but with diminished force.

"25th. (7th day.)—Countenance pale; pulsation *more* distinct; the thrill quite perceptible; no pulsation in the femoral artery below the crural arch; blood drawn yesterday buffed and cupped; 12 ounces of blood taken from the arm; digitalis increased to 30 drops, three times a-day; diet as before.

"26th. (8th day.)—The ligature came

away last night, but was lost in the bed; pulse as yesterday. On turning in the bed, he suddenly felt a severe pain in the thigh and knee, 'as if' (to use his own expression) 'the knee was tearing off of him;' said 'the fore part of the thigh was all numb.' He cried out from pain: in ten minutes it subsided.

"It now became a subject of great interest to determine the cause of the return of the pulsation, after it had ceased for fifty hours. Has the blood returned by the free anastomosis between the internal iliaes? or has the catgut ligature become macerated and given way? The pulsation is stronger than could be expected, if the tumor were supplied only by the collateral source of anastomosis; the prevalent opinion therefore was, that the ligature had given way.

"27th.—Less pain in the knee and thigh; in other respects as yesterday.

"28th.—As yesterday, but complains less; asks for nourishment; the wound is quite healed, with the exception of about an inch, in the middle of this line; the hole through which the ligature escaped is apparent. Pulsation in the tumor nearly as strong as before the operation; yet the whole bulk of the tumor is reduced by at least a third.

"At 6 p.m. while he was sitting up in his bed, taking some gruel, the blood suddenly gushed from the wound, and deluged the bed. He fell backwards, and expired in less than a minute. The body was examined at one o'clock on the following day, in the presence of Messrs. Colles, Wilmot, Cusack, Stringer, Porter, and several other professional gentlemen.

"*Dissection.*—The intestines being removed, the peritoneum raised, and the great abdominal vessels laid bare, the common iliac artery, at about three-fourths of an inch from the bifurcation of the aorta, was lost in an oblong tumor, about three-fourths of an inch in diameter, and one and a half in length; the tumor terminated upon, but did not communicate with, the aneurismal sac. On cutting into the tumor, about half an ounce of greenish pus flowed from the wound, and discovered the artery, which appeared somewhat contracted at one part, and its coats deeply indented, but not cut through, marking the place where the ligature had been applied. On blowing into the iliac artery from

above, bubbles of air escaped freely from the external wound from whence the blood had issued; water injected by a syringe escaped by the same passage; clearly establishing the important fact, that the ligature, which was of catgut, had been dissolved by the heat and moisture of the wound, and thrown off, before the obstruction of the artery, or the coagulation of the blood in the aneurismal sac, had been completed. It further appeared that the dissolution of the ligature had caused a small abscess to form in the place which it occupied. On slitting up the artery, the internal and middle coats were found to be completely divided in the whole circumference of the vessel, and small portions of lymph adhered to its internal surface. The popliteal aneurism was far advanced towards a cure; the contents of the sac were quite solid, and the tumor was reduced to about the size of a walnut: the artery, for six inches above the sac, was filled with a firm coagulum*."

Dr. Crampton, in some very brief remarks which follow, points out that, according to the method which he adopted in the preceding case, the operation of tying the common iliac artery is not only feasible, but very easy of execution: the difficulty experienced by Dr. Mott seems to have been from his making the incision too low. Dr. Crampton is of opinion that, by a method similar to that above detailed, a ligature might be placed round the aorta without interfering with the cavity of the abdomen.

Dissection of the Parts concerned in an Aneurism, for which Dr. Stevens tied the Internal Iliac Artery in 1812. By Mr. RICHARD OWEN, Surgeon.

A negro woman, who had been brought to the West Indies in 1790a had a pulsating tumor, as large as child's head, over the sciatic notch on the left hip. It had commenced about nine months before. On the 27th December 1812, the following operation was performed.

"An incision about five inches in length was made on the left side, in the lower and lateral part of the abdomen, parallel with the epigastric artery, and

* The parts are deposited in the museum at the Park-Street School.

nearly half an inch on the outer side of it; the peritoneum was separated from its loose connexion with the iliacus internus and psoas magnus; it was then turned inwards to the division of the common iliac artery. The internal iliac being found, and compressed betwixt the thumb and finger, the tumor ceased to pulsate, and began to disappear; a ligature was passed round the vessel, by means of a probe, and it was tied about half an inch from its origin. The tumor disappeared almost immediately after the operation, and the wound healed kindly. About the end of the third week the ligature came away, and in six weeks the woman was perfectly well. The operation was neither very difficult nor very tedious; the woman did not complain of much pain, nor did she lose an ounce of blood. There was no difficulty in avoiding the ureter; when the peritoneum was turned inwards, the ureter followed it."

The woman enjoyed good health for ten years, when she died (1822) of disease of the lungs. Dr. Stevens injected the parts, and found that the internal iliac artery had become impervious at the part where the ligature was applied; that the ischiatic artery was continued, in the form of a ligamentous cord, to its exit from the pelvis, but that the glutæal artery was pervious at its origin. The pelvis was put up in spirits, and sent to this country with some other things, which were deposited somewhere in the city, and where it might have remained till the day of judgment, had not Dr. Stevens happened to come to this country and read in the pages of the Gazette some doubts which had been expressed by Mr. Lawrence, as to the practicability of tying the internal iliac artery. On this, he posted off to his friend in the city, found the said pelvis stowed away among other West-Indian preserves, and transported it to the College of Surgeons. Dr. Stevens was good enough to furnish us with some particulars, which will be found at page 315 of our last volume. Mr. Owen, to whom the dissection was entrusted, followed the investigation with great patience and industry; and the parts, demonstrated to the satisfaction of all parties, placed beyond a doubt the accuracy of Dr. Stevens's account previously published.

The Dublin Hospital Reports, and Communications in Medicine and Surgery. Vol. V.

History of Two Cases of Aneurism, successfully treated by Ligature. By W. H. PORTER, Member of the Royal College in Ireland, &c. &c.

IN one of these cases the aneurism was of the left subclavian; in the other of the right carotid. In both the vessels were tied with a single round ligature; in one the carotid was tied within a quarter of an inch of its origin from the innominate, a situation which has been regarded as calculated to interfere with the formation of the coagulum.

William Austin, æt. 40, an ostler, applied for advice on the 25th of June, 1829, when he complained of pain in the left shoulder, arm, and hand, with numbness, and œdema of the limb. He had a firm pulsating tumor below the clavicle, corresponding to the division between the pectoralis major and deltoid muscles: it became smaller on being pressed, and lost its pulsation when the artery was pressed against the clavicle. He was not aware of having received any injury of the part, and had only observed the tumor about eight or nine days before, nor could he be persuaded that it had any thing to do with his complaints. He was admitted into the Meath hospital; confined to bed; maintained in a state of absolute quiet; had cold applied to the tumor; was purged, and bled to twenty-seven ounces. The tumor, notwithstanding, continued to increase, and on the 29th had acquired more than double its original size: it was therefore resolved to tie the subclavian next day.

"The patient being placed on a table, his head supported upon a pillow and thrown back as far as possible, whilst his shoulder was depressed by an assistant, an incision was made along the edge of the clavicle, commencing midway between the centre of the sternum and the acromion process, and carried outwards to the extent of two inches and a half. From the sternal extremity of this incision, another was carried along the line of the external edge of the scalenus, and the triangular flap, thus formed, was dissected back, exposing the fascia, the external jugular vein, and a plexus of small veins communicating with it. In carrying the incisions deeper, a small vein was cut

off close to the trunk of the jugular, which poured out so much blood as to obscure the parts, and to render the application of a *temporary ligature* necessary. The perpendicular incision was carried no deeper than to expose the fibres of the scalenus muscle, after which the remainder of the operation was completed with the handle of the knife and the finger. The detachment of the cellular tissue in this manner was easily accomplished, but required a good deal of time, in consequence of the narrowness of the wound in its deepest part, the entire breadth of which extended only from the external edge of the scalenus to the trunk of the jugular vein, a space of not more than three-quarters of an inch. Had I deemed it advisable to divide this vessel, the time occupied in the operation must have been greatly lessened, but in that case the patient either should have lost a very considerable quantity of blood, or have been exposed to the hazard attendant on the application of a ligature around the vein, a risk which I consider by no means of a trifling nature, and which ought to be avoided at any sacrifice of time whatever.

“On exposing the omo-hyoidens muscle, a very large artery (probably the transversalis humeri), with its accompanying vein, was seen to traverse the middle of the perpendicular incision, in a situation where it might easily have been wounded had the edge of the knife been used incautiously. The large nerves next came into view, and one of them receiving an impulse from the artery, was for a moment mistaken for it; but on applying pressure, and finding that the circulation in the limb was not thereby commanded, that idea was abandoned, and the vessel sought for still more deeply. A few more touches of the handle of the knife was sufficient to lay it bare: the needle was introduced from above, and the ligature thrown round it with the greatest facility. It was then tied firmly, and the pulsation in the aneurism and in the radial artery ceased instantaneously. One end of the cord was cut off close to the knot, the other left hanging out of the wound, the edges of which were brought together, one stitch only being applied to the angle of the flap.

“The patient lost not more than three ounces of blood during the operation,

and walked from the theatre to his bed in an adjoining ward.

“Immediately after the operation he experienced some uneasiness in the left arm, with a peculiarly disagreeable sensation which he could not describe, but on the limb being wrapped in flannel he expressed himself quite relieved, and from that moment remained perfectly tranquil, without any symptom that could excite the smallest apprehension. No perceptible alteration of temperature could be observed at any time in the arm: both limbs were carefully examined by the thermometer at different times, but the instrument never indicated any difference between them in this respect.”

The ligature came away on the seventeenth day without the loss of a drop of blood. No constitutional symptoms worth recording occurred; his pulse (except once) was never above 74; and at the end of the third week the wound was healed. He was sent out of the hospital, and placed in lodgings on the 29th of July, cold applications being made to the tumor, and leeches occasionally put on it, to prevent a tendency which was early manifested to suppuration. This event supervened notwithstanding, and he was re-admitted on the 12th of August. On the 14th the abscess was opened; about a pint of fetid pus, with clots of blood, evacuated. No fever followed, and he was finally discharged quite well August 29th.

E. Rourke, æt. 40, a short woman, of spare habit, a servant, admitted into Meath hospital 19th August, 1829. She had a large tumor on the right side of the neck, extending from within half an inch of the root of the ear to within an inch of the clavicle: its longitudinal measurement was seven inches and a quarter; its transverse six inches; its shape globular. It was tense, pulsating, and natural in colour except one red spot, about the size of a split pea. She gave the following history: about 15 years before had first observed the tumor, which she attributed to having had a tooth drawn: it was then about the size of a small “kernel,” and at the end of seven years did not exceed a small “nut” in bulk. At one time she had rubbed it with some stimulating liniment, after which it increased more rapidly. When this was discontinued the growth again became very slow till

about three weeks before her admission, when she struck her neck against a bed-post, by which it was rendered painful, and its growth much accelerated; indeed, it was now increasing so fast that it was feared sufficient space would not be left to secure the artery between it and the clavicle if the operation was postponed. It was, therefore, performed on the day but one after her admission.

"A perpendicular incision was made of about an inch in length, nearly along the line of the anterior edge of the mastoid muscle, and terminating at the sterno-clavicular articulation, from the lower end of which another was carried outwards along the upper edge of the clavicle to the extent of nearly three inches, and the flap being turned up, was held by an assistant. The mastoid muscle was next exposed, and a director being passed under it, its sternal and a great portion of its clavicular attachments were divided. The edges of the sterno-hyoid and sterno-thyroid muscles were easily detached and drawn inwards, by the nail of the fore-finger of the left hand, and the sheath of the vessels exposed: this was torn through by the end of a director, and the artery came distinctly into view. The needle was now passed under it from without inwards, and it having been ascertained that nothing but the artery was included, the ligature was tied firmly around it, at the distance of about three-eighths of an inch from its origin from the *arteria innominata*. During the operation the great jugular vein was not exposed. It could be seen through the sheath occasionally becoming greatly distended with blood, but it never obscured the artery or embarrassed the operation. The *par vagum* was not seen at all. Immediately on the ligature having been tightened the pulsation in the tumor disappeared.

"In the course of two hours after the operation, the patient complained of giddiness in the head, numbness and trembling of the right arm, an uneasy sensation in the teeth and gums of the upper jaw, and the temperature of the right side of the face and of the right hand was evidently lower than that of the opposite side.

"Four hours after the operation, the temperature of both sides of the face was the same, but with the return of heat came a very perceptible pulsation

in the tumor. Patient excessively uneasy and restless; pulse 92, and full; skin hot and dry.

"She was now bled to the amount of 12 oz. and expressed herself relieved, but towards evening she again became uneasy; complained of the numbness of the right side of the face and of the arm: she vomited a small quantity of greenish matter. A turpentine enema was administered, and she had a draught of carbonate of ammonia saturated with lemon juice."

The tumor continued to pulsate, and to increase in size for several days after the operation, and the patient was anxious, with a hot skin and frequent pulse. Pounded ice was applied to the swelling, alternated with leeches. She was bled twice, and freely purged. Towards the end of the second week the tumor appeared rather to diminish, and the pulsation became obscure. On the 19th day after the operation the ligature came away without any blood, and on the 30th day she was able to get up and walk about, the wound being very nearly healed. She would now have been discharged but for two circumstances—first, the tumor, though diminishing, decreased so slowly that it was still as large as an orange; and, secondly, she had a short dry cough, which was extremely harassing to her. The chest, on examination with the stethoscope, appeared to be sound. She was placed in lodgings about a mile and a half from Dublin, where she remained for a month, at the end of which time she was re-admitted into the hospital, when her situation is thus described:—

"On her return it appeared to be about three-fourths of the size it had been originally. It was of the natural colour, very hard, firm, and flagged at the base, softer, and giving the sensation of fluctuation superficially. It was slightly corrugated, the skin seeming loose and moveable over the sac. The finger could be easily passed along its superior edge between it and the inferior border of the jaw-bone, shewing that whatever artery had been the seat of the disease, it was not the fascial, as had been originally supposed, and between its lower border and the clavicle there was a space of an inch and a half in length. Its transverse diameter seemed to be proportionally diminished. With respect to her general health there was no remarkable alteration. At pre-

sent she is reduced and weakly; has a moderate appetite; little or no energy; enjoys but little sleep; has a weak pulse, beating about 88 in the minute, and great tranquillity of disposition. She always says 'she is better,' but the cough is not altered in the slightest degree."

On the 7th of December Mr. Porter summoned a consultation, with a view of deliberating on the propriety of cutting into the tumor, evacuating its contents, and afterwards endeavouring to heal up the wound. The suggestion was not approved of.

On the night of the 11th (Dec.) *being nearly four months after the operation*, she was seized with shivering, followed by fever; the tumor began suddenly to increase in size, accompanied with a sense of burning heat, and of general uneasiness over the side of the neck and head. Next day (12th) a "remarkable sensation of fluctuation" was perceived; and in the evening, as she had not been relieved by the remedies employed, a puncture was made with a common needle, when a fluid escaped having much the appearance of the serous matter often found in scrofulous abscesses; on slightly enlarging the wound, the only change was that the discharge (still scanty) was more highly tinged with blood: the wound was closed with a twisted suture. Every effort was now made to reduce the inflammation of the tumor, to which leeches were repeatedly applied, while it was habitually covered with cold cloths. On the 20th the tumor was found to have burst at the point where it had been opened, and at another spot besides; pus flowed from it of healthy character, and not at all tinged with blood. On the 24th a large coagulum escaped. The tumor, which had gradually diminished, was now not above one-third of its original size; but the general health was not much improved—the emaciation was great, and the cough troublesome. Little change now occurred till January 12, when, "on pressing immediately behind the jaw, a deep cavity was perceived, from which issued bubbles of air." Pressure by graduated compresses were applied, but without the smallest benefit.

"Jan. 20th.—The discharge of pus mixed with air still continued, and it seemed as if the pressure, not capable of producing obliteration of the abscess, acted rather as a source of irrita-

tion. It was therefore discontinued, and another counter-opening made, with directions to the patient to lie on the right side, in order to favour the evacuation of the matter. To prevent a premature healing of this wound, a small tape was passed through it and the original aperture, forming a kind of seton; and in performing this operation the probe, in passing the coagulum which occupied exactly the inter-space between the two wounds, disturbed it a little. Immediately a flow of scarlet-coloured blood took place, to the amount of more than one ounce, but which was easily commanded by supporting the coagulum with a small compress placed exactly over it. Patient was exceedingly irritable during the operation and the subsequent dressing, but on the whole her health appeared to be improved."

The seton was removed in two days, as it did not answer the purpose intended; and in a few days more dressing of every kind was abandoned, except a small bread and water poultice laid over the parts. From this time the improvement was progressive, and very rapid. The coagulum could be felt in the neck, about an inch below the angle and base of the jaw, evidently extending deep into the neck. This circumstance, taken in conjunction with the rapid return of pulsation after the operation, points to the inference that the disease was originally aneurism of the internal carotid. A very scanty healthy discharge continued for some weeks longer, but before the end of February the tumor had entirely disappeared, and the wound healed, so that she was discharged from the hospital early in March, perfectly recovered.

[See also Cases of Aneurism at page 158.]

MEDICAL GAZETTE.

Saturday, October 30, 1830.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

THE CONCOURS.

ONE article in the late *ordonnance* of the French King is this:—"Every professorship made vacant in consequence of the present *ordonnance*, or which be-

comes so by the resignation, removal, or demise of its former occupant, shall be disposed of by *Concours*." And it is founded upon this passage in the *rapport* of M. de Broglie:—"The re-establishment of the *Concours*—the abolition of the privilege of the *agregés* as the only candidates for professorships—and the admission of all doctors to give proof of their talents for filling vacant chairs—are measures demanded from all quarters; and *though the Concours is not without its inconveniences*, inasmuch as it may drive from the contest men who will not hazard an already-made character, by entering the lists with younger competitors—it has yet the advantage of drawing forth talent which might otherwise remain in obscurity—of tending to exhibit those qualifications in the candidate which are essential in a professor, namely, clearness and precision in expressing himself, and that fervour of elocution which gains the hearts of students, and attaches them to science. It is besides not impossible to arrange its details in such a way as that no man of merit can refuse to submit to the trial."

The *Concours* then, it appears, is restored, but not without its restrictions. Whoever has paid any attention to the state of medical education in France for the last ten or twelve years, must be familiar with the continual cry of discontent issuing from the metropolis of that country, lamenting the loss of the favourite mode of nomination: the nature and the details too of that mode must be familiar to him. But there are numbers, especially of persons unconnected with the profession, who have heard of the *Concours* recently for the first time; its fame has unavoidably reached them from the unusual sensation it has created; they are desirous of knowing something more about it; and we have ourselves of late been questioned by many intelligent members of the community, with the

simple interrogatory of—what is the *Concours*? The present may not be an inappropriate opportunity for stating a few short facts on the subject, and offering a few remarks on the nature, origin, and advantages of this much-admired mode of nomination; with our apologies at the same time to those who are *au fait*, and as well informed as need be, upon the matter.

The *Concours* is a mode of examination in which it is attempted to ascertain the exact value of a candidate's qualifications for the post to which he aspires, by public scrutiny; he has to undergo the test of delivering one or more lectures, at a short warning, upon a subject selected by lot—to compose a dissertation which will occupy him some days, and to defend it publicly for some hours—to dispute with his competitors, to attack their theses, and, in short, to make good his pretensions and real title to the honour which he seeks. This, with some slight modifications, may be taken as the general description of the *Concours* as applied to professors, *agregés*, and *élèves*; in the two latter of which classes it has been preserved undisturbed from its very origin. The *Concours* is further described by its admirers as the child of the revolution, a scion that grew up flourishingly for more than twenty years; and which then, in one of its most useful functions—the nomination to professorships—fell into discredit and abeyance. It was not, however, totally abolished in this respect until the promulgation of the de-tested ordonnances of 1822-3, when the mode of presentation and election to professors' chairs was substituted in its place. On this change it is needless to repeat our opinions. We have already expressed ourselves strongly upon the injustice of the proceeding—the arbitrary removal of some of the most eminent men, in order to make way for the protégés of the minister;

but independently of the personal injustice committed in the transaction, the principle was bad—the consequences detrimental. The depriving the French school of their peculiar and favourite Concours, was, we have no hesitation in saying, a wanton piece of ministerial mismanagement. Yet why should it be concealed, that even in France there have not been wanting those who gave a decided preference to the method of *election*—distinguished men of science, who defended the abolition of the Concours with all their powers of reasoning and argument? It was strongly stated in favour of the elective method, that its character was more generous, liberal, and ingenuous; that it was, and is, the method adopted in the admirable system of electing the representatives of the nation which prevails in France; and that in it a man is fairly and properly chosen by his peers;—while it was further urged, that the Concours was, in a great measure, merely an affair of memory; mainly depending on the candidate's consummate assurance; and not only calculated to deter the modest man from encountering the ordeal, but the man of established reputation. It will have been observed, too, that the enlightened minister, who, at the suggestion of the commission of eight, drew up the elaborate report to which we have already frequently alluded, adverts pointedly to certain *inconveniences* of the Concours—inconveniences only partially counterbalanced by the encouragement which it confessedly holds out to unfriended merit.

It is an imposing thing, it must be admitted, to see so cheering a prospect of “a fair field and no favour,” laid open to every adventurous aspirant; a brave *spectacle* to behold the pitted candidates engaged in fierce encounter, and fighting the souls of their adversaries with superior skill, courage, and

address;—in short, it is a display *peculiarly French*. It is certainly not German any more than it is English, nor consistent with the customs of any other European state with which we are acquainted. In the German Universities, the professors are men of unquestionable ability—perhaps not inferior to any in Europe; yet they are not chosen by Concours. In England, if we may be permitted to speak without breach of decorum, our teachers are as competent as could be procured by the actual Concours—yet it is scarcely known even by name in this country. The principle, however, is not so. It may seem somewhat paradoxical, but we cannot help asserting that the principle of the Concours is perhaps nowhere so much acted upon and appreciated as in this very metropolis. The 30 or 40 private schools here, which have the whole business of medical education conducted in them, have their teachers almost all selected by a scrutiny equivalent to the Concours: it is, in fact, a tacit Concours—the scrutiny of public opinion. It turns upon that greatest of all tests—the character and real merit of the candidate who solicits public favour.

The plan of examination by Concours, is one which is attended with singular advantage—when applied, as it has long been in France, simply (if not solely) to the nomination of *élèves*. It may be worth while to describe the ceremonial with a little detail. It is conducted before a public audience, which, in Paris, seldom consists of less than four or five hundred persons. A jury of five medical practitioners are chosen by ballot from amongst the medical body. A number of skilfully-framed and comprehensive questions are placed in a vase. One is drawn out by a public officer, and presented to each of the sets of candidates as they pass on in rotation to private rooms,

where they are kept from communication with others. Eight minutes are allowed them to frame verbal answers, which they return and make publicly. It frequently happens that the question will hit some point on which the candidate is entirely ignorant; when, instead of returning, he quits the field altogether, and the announcement is regularly made to the court that *Monsieur un tel* has disappeared. Others break down in their first answers. The ranks, in fact, are greatly thinned by the number thus put *hors de combat*. Each candidate is at liberty to question his competitor, and in the contests for the higher offices these cross-examinations often create finished and instructive displays of science and skill. Besides the questions to which verbal answers must be given, another set of a higher nature are put to the candidates, who are required to furnish written answers within two hours; during which time they are enclosed in rooms by themselves, and prevented from communicating with others. The answers are sealed, and at the next meeting of the examiners opened and read publicly; after which, the jury retires to consult upon their merits. The proceedings are adjourned from day to day, and are often carried on for a whole fortnight. "A better plan than this," says the *Examiner*, from which we have borrowed the preceding detail—"a better plan for supplying a constant and powerfully active motive to exertion, and for securing just decision, has never, that we are aware of, been conceived or executed. It may easily be imagined how anxiously the student will anticipate the display which he must make before the assembled body of the profession to which he seeks admission, and before the public at large, on whose good opinion he must depend for success. He can only win his way by sedulous attention to the entire course

of study, and by availing himself of every opportunity that may be offered to him for gaining practical knowledge." All this, the reader will observe, applies simply to the case of nominating pupils to official situations about the schools; much of it, however, might be advantageously adopted among ourselves. In admitting candidates to diplomas and degrees, the Concours system might be employed with good effect, and thus the great ultimate object, which some conceive to be a desideratum—the electing efficient professors to our medical chairs—be sufficiently secured.

But we are decidedly of opinion that professorships, at least in this country, should be disposed of only by election, and left entirely to the discretion of the electors. He, however, who is so elected, must not suppose himself safe thenceforward from the ordeal of further scrutiny: he is still exposed to the verdict of public opinion, and should he be found light in the balance—better for him he had never emerged from his obscurity, nor put forward claims to public patronage. There is in such a test a vindictive power more severe than any that an ordinary tribunal can exert—a moral restraint more obligatory than any that philosophy can show.

We make these allusions to the state of things here, because we know that some persons are much dazzled with the aspect of the French mode of examining for the chairs, and think it should be adopted by us without hesitation, and assert that such a course would be attended with the greatest advantage. In the formation of such baseless projects, the peculiar circumstances of each capital—we mean those of London and Paris—with respect to the arrangements for medical education in each, are overlooked. In the latter, every thing is under the regulation of government—the schools of medicine, more particu-

larly the *Faulté*, are entirely under government control: pupils have in Paris but one mart to go to, and the qualifications of the authorized teachers in that metropolis are consequently looked upon, as they should be, with a jealous spirit of inquiry. When the monopoly of teaching medicine is secured to a certain set of men, the merits of these men naturally invite inspection, and tests of the strictest kind are necessary to fix upon them the stamp of unquestionable authority, and to set them at once in a reputable point of view before the public. Yet we must confess ourselves at a loss to know how this mode of proceeding would supply us, after all, with a more efficient body of teachers than we can point out among ourselves. In the English system, every man, it is true, may set himself up as a teacher; but by his own merit must he stand or fall, just as certainly as if he had originally been submitted to the ordeal of the *Concours*.

It is not difficult to conceive the idea of the *Concours* plan being caught up as likely to confer a character of novelty and value upon a new establishment. This, in fact, was understood to be the principle upon which the professorships in the London University were to have been disposed of, when that institution was first projected. But it was a plan either taken up in the first instance *ad captandum*, or the managers must have been soon convinced of the inexpediency of broaching such a system in this country*. There cannot be a greater mistake than to talk of the propriety of introducing the *Concours*, for the nomination of professors, into our English

establishments; at least, until their whole constitution be altered—our national character changed—and French habits and feelings have gained a complete ascendancy over our own. Every nation has its peculiarities; and the *Concours* must be allowed to be one of those belonging to the French. So long as it is maintained and preserved to their schools, we bestow, as we have done, unqualified praise upon the system; but to speculate upon its introduction among us as a measure of propriety or expediency—without effecting beforehand the most material, and, we will add, improbable alterations in our present modes of proceeding—we must pronounce to be both chimerical and absurd.

CONVULSIVE PAROXYSMS CURED BY
APPLYING A LIGATURE TO ONE OF
THE FINGERS, IN WHICH THE AF-
FECTION SEEMED TO COMMENCE.

A GIRL between 13 and 14 years of age, and who had not yet menstruated, had been subject during four or five months to periodical attacks of convulsions, having no apparent cause, commencing with acute pain at the extremity of the ring finger of the left hand, and which was immediately followed along the whole course of the arm and head by a sensation similar to that of aura epileptica; the patient then lost her consciousness, and fell; she had convulsions more or less violent, which left her in a state of prostration and torpor, so great that she knew nothing of what passed round her, and retained no recollection of what had happened. These attacks, which came on every month, having appeared to the physician who was called to depend upon the absence of the menses, directed his treatment accordingly; but in the meanwhile he recommended the application of a ligature round the finger in which she felt the pain, and by this means arrested the paroxysm, which was imminent.

Next day the same pain came on, and the same application of a ligature was adopted; but whether it had been too

* We have been informed that the Council have determined to aid their judgment in selecting a professor for a chair now vacant, by requiring each candidate to deliver a discourse before them on the subject which, as a lecturer, he should have to discuss. This will be taken as a proof of fitness for the situation; and so far the introduction of the *Concours* system (if the delivery of a prepared lecture deserve that name) may be attended with a beneficial result.

late, or not sufficiently tight, the attack was not prevented. a fresh ligature was then applied above the elbow, and the fit did not take place.

The patient, encouraged by this favourable result, adopted this precaution every time the pain was experienced, and thus constantly warded off the attacks which she had experienced every month, during several successive days.
—*Decadus de Medicina y Cirurg.*

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

WESTMINSTER HOSPITAL.

Cases of Popliteal Aneurism.

WILLIAM COOPER, æt. 26, admitted March 24, 1830, under Mr. Guthrie, with a pulsating tumor about the size of a large orange in the popliteal space of the left leg, and complaining of a dull gnawing pain extending down the calf, sometimes becoming very acute. The leg is rather swelled, but not oedematous, and the pulsation in the tumor is removed by compressing the artery above.

He is a carter, residing at Leatherhead, and for the last five years has enjoyed very good health. He is of moderate stature and rather spare habit. The patient states, that eight weeks ago, while walking, he was suddenly seized with a pain in the left ham, like the cramp, and felt a tumor about the size of a hazel-nut. He had then walked about five miles and a half, and was obliged to walk forward nearly nine more, which he did with great difficulty. He continued at his work the next day, and occasionally fomented the tumor with hot water. The day before he first perceived any thing, he had ridden seventeen miles on horseback, but had used no violent exertion. The tumor has been gradually increasing in size.

On his admission, he was ordered to be kept quiet in bed, to have low diet, beef tea, and an egg daily. His pulse has been quick and full, and, besides being freely purged, he has been bled twice in consequence.

30th.—Mr. Guthrie had purposed operating on Saturday, but the blood abstracted last night presenting a buffy coat, he deferred it till next week.

April 4th.—He is much the same; pulse 72, and tolerably full. To be bled to-day to 3xij.

5th.—The blood abstracted yesterday still presents an inflammatory character, but not so much as before. The tumor is gradually increasing in size, but he does not complain of more pain.

9th, 10 A.M.—The temperature of the tumor 89 degrees; the calf of the leg is 92. Popliteal space of the other limb, 96; calf 92.

10th.—Temperature of the tumor 89; that of the limb, 91½. He passed a very good night. Pulse 76, firm; bowels well opened, and he appears anxious to have the operation performed.

At one o'clock P.M. the patient was placed on the table, and the leg and thigh being relaxed, Mr. G. made an incision through the integuments about three inches in length, commencing two inches below Poupart's ligament. The fascia being divided to the same extent, the inner edge of the sartorius was exposed, and the artery secured by two ligatures of dentist's silk; and all pulsation in the tumor having ceased, the edges of the wound were brought together by strips of adhesive plaster, and the patient removed to bed. The patient suffered very little inconvenience after the operation.

4 P.M.—The temperature of the left or affected leg 82; that of the right 86.

6 P.M.—Right leg 86; left 84. He complains of shooting pain in the knee and calf. Pulse full. He has flannel applied to the limb, and hot water to the foot.

April 11th.—Passed a comfortable night; complains this morning of pain in the wound; the leg is rather swollen and the veins slightly distended. There is no pulsation in the tumor. Temperature of both legs 92. Pulse 100, full, but compressible; skin rather hot; tongue furred; complains of pain in the head, and nausea. Mr. Guthrie saw him at eight o'clock, and ordered him the following mixture.

R Potass. Carbon. ʒj.
Succi Limonis, ʒiij.
Aque. 5x.
Sodar. Sulph. ʒj. M. ft. haust. 4tis horis sumend.

7 P.M.—His bowels have not been open since the operation. Tongue white and moist; less pain in the head; pulse 110; temperature of left leg 96, of right 98. Ordered by Mr. Guthrie,

Pil. Hyd. gr. iv.
Ext. Col. C. gr. vj. ft. Pil. ij. st. sumend.
and a dose of the saline mixture every two hours, till the bowels are well opened

April 12.—He was visited by Mr. G. this morning. He had passed a very good night, and had one scanty evacuation. Skin hot and dry; pulse 100.

V. S. ad ʒviij. haust aperiens statim.

11 A.M.—The blood drawn slightly buffy, but not cupped. The draught has procured him three motions. Temperature of both limbs 94.

1 P.M.—Mr. G. has again seen him. He

complains of pain in the head and down the inner side of the thigh. Pulse frequent, and he is very irritable. Three drops of Batley's solution to be added to each dose of the same mixture. Pulse 130.

V. S. ad $\frac{3}{4}$ xij.

10 P.M.—He feels tolerably easy now, with the exception of some little pain in the abdomen. He felt decided relief from the last bleeding. Skin hot; pulse 110, soft. His bowels have been freely acted upon. He has just taken four minims of the liq. opii sed. which is to be repeated at twelve o'clock, if he does not rest well.

April 13th.—The opiate was repeated at twelve, after which he passed a comfortable night. He has no pain in the head this morning. The shooting pains in the course of the femoral vein still continue, and immediately below the incision there is a slight fullness and a blush of inflammation, accompanied with tenderness on pressure. Skin cool; pulse 98, soft; tongue cleaner, and moist; thirst less urgent. The tumor is smaller, and the leg less swollen. The strips of plaister to be loosened, twelve leeches to be applied in the course of the femoral vein, and afterwards a bread and water poultice.

Haust, aperiens. statim.

10 P.M.—He has obtained some relief from the leeches. Pulse 110; tongue white and moist; pulse 120. He has been bled this afternoon, and seems rather better.

Rep. haust.

14th, 8 A.M.—He has passed a good night, and suffers little inconvenience from the thigh. The blood abstracted last night is cupped and buffy. Tongue white and moist; skin cool; pulse 110, soft, and regular. Bowels open; temperature of both legs 92.

2 P.M.—He has been seen by Mr. Guthrie, and the dressings were removed. The wound appeared healthy and discharged freely. The matter which had formed in the course of the femoral vein was pressed out, and the wound dressed. Mr. G. remarked that there was matter under the fascia, and directed a roller to be applied the next morning. Slight tenderness in the upper part of the limb, but no pain. Countenance blanched, but cheerful; temperature of both legs equal, and no pulsation perceptible in the tumor.

10 P.M.—He expresses himself relieved by the evacuation of the matter. Skin cool; bowels freely opened.

Cap. Liq. Opii Sed. ℥iv.

15th.—Slept well last night; no pain in the thigh, and very copious discharge from the wound. Pulse 82, soft and regular. There is some tenderness of the abdomen

above the pubis, and he complains of inability to void his urine.

12 P.M.—He has passed his water and feels much easier; a roller, with a pad, has been applied in the course of the femoral vein.

16th.—He has been dressed to-day by Mr. Guthrie. Discharge is still copious.

17th.—Going on very well. The tumor is much smaller, and the veins of the leg less distended.

27th.—The patient has continued improving in health; the wound has been dressed every morning, and the action of the bowels regulated by small doses of Epsom salts. Both the ligatures came away this morning.

May 16th.—The patient's health has steadily improved since the last report. A slight discharge of purulent matter existed for several days; it has now entirely ceased, and the patient may now be pronounced cured.

CASE II.—Thomas Canagheron, *æt.* 33, admitted May 14th, under Mr. Guthrie, in consequence of a hurt he received on the 2d of April in his left leg, by its being crushed between his companion's saddle and his own, while riding at a brisk pace. Two days afterwards, he discovered a pulsating tumor behind the knee. He now came under Mr. Guthrie's observation, who pronounced it to be an aneurism; but as it increased slowly, he allowed it to remain until the 14th of May, when he was taken in. The patient appears to be in sound health; his chest is well formed, broad and capacious; action of the heart regular; pulse 64; bowels open; tongue clean; appetite unimpaired. Temperature of limb 88. Ordered to bed, and to have low diet.

May 15th.—The man was placed upon the table, and Mr. G. proceeded to the operation. Having first traced the course of the artery, he made his incision in that direction above the sartorius. The artery was readily found and tied, with scarcely any displacement of the parts. A small artery was divided before he came to the femoral, but was not very troublesome. Pulsation in the tumor stopped immediately the artery was tied. A single thread of dentist's silk was used. Mr. Guthrie observed after the operation, to the pupils, that there was every probability that this man would rapidly recover; the former patient had required six weeks, which was a longer time than he anticipated would be taken up by the cure of this man; the reason of which was, that, from having cut a considerable branch close to the trunk, he had thought it right to place two ligatures on the artery, in order to guard against secondary hæmorrhage, which it might have produced, and was in all probability the cause of the copious discharge and protracted union—the intermediate portion of artery having to slough out. He con-

cluded by some observations on the mode of tying the artery, and the necessity of disturbing the parts as little as possible; which he had shewn to be not at all necessary in the operation just performed.

3 P.M.—Temperature of the limb 88; the other the same. He is very comfortable, and free from pain.

6 P.M.—Mr. Guthrie has just seen him. The tumor appears diminished already; veins are slightly distended; he complains of sickness, and pain in the thigh and about the ankles; no sensation of numbness. Pulse soft and natural.

Cap. Liq. Opii Sed. $\mathfrak{m}\mathfrak{x}\mathfrak{v}$. h. s.

May 16th, 8 A.M.—He has passed a comfortable night; there is no febrile excitement; thigh and leg easy; pulse 68; bowels not yet open; tongue moist; skin natural; temperature of the affected limb 88, the other 87.

Vespere.—The sickness has returned; bowels have not acted.

R Carb. Potassæ, $\mathfrak{z}\mathfrak{j}$.

Succi Limouis, $\mathfrak{z}\mathfrak{i}\mathfrak{j}$.

Aqua, $\mathfrak{z}\mathfrak{v}$.

Magn. Sulph. $\mathfrak{z}\mathfrak{j}$. ft. haust st. sumend.
et repetatur post duas horas.

He complains also of inability to void his urine, but is free from pain. A sense of fullness is experienced in the pubic region; no pain in his head, thigh, or leg; tongue moist, covered with a whitish fur; pulse 74; temperature of limb 92, the other 87.

May 17th.—He has passed a comfortable night; slept pretty well; sickness has subsided; bowels have acted freely. He experiences no pain, but a sensation of numbness in the foot. Skin moist; pulse 70; temperature of the left leg 93 degrees, of the right 92. He voids his urine frequently, and in small quantities.

19th.—He has been going on remarkably well, without an unfavourable symptom. He was dressed to-day for the first time, and the wound was found nearly all united by the first intention. Tumor is considerably less; discharge slight and healthy.

22d.—Continues going on well.

June 16th.—The ligature came away to-day. The man is in good health, and the tumor gradually diminishing.

These cases confirm the practice of allowing aneurisms to proceed for at least six weeks before the operation is performed, in order that the collateral branches may be sufficiently enlarged to support the life of the limb. The maintenance of the circulation was never in the slightest degree doubtful in either of these cases. The tumors having gradually but steadily diminished, there can be no question that the cure is complete.

In the first case, an artery running to the triceps muscle was divided, and was so

troublesome, from the copious hæmorrhage, that it was necessary to compress the artery above before the operation could be concluded; and for this reason, as Mr. Guthrie observed, two ligatures were applied—one above and the other below the branch—in the same manner as he would have done in a wounded artery. In the second operation, only one ligature of dentist's silk was used.

METROPOLITAN SOCIETY OF GENERAL PRACTITIONERS.

To the Editor of the *London Medical Gazette*.

Society's Chambers, 4, Regent-Street,
October 25, 1830.

SIR,

THE following resolution was passed at the general meeting of the Metropolitan Society of General Practitioners in Medicine and Surgery, held on the 21st instant:—

“Resolved unanimously—That the thanks of this meeting be given to the Editors of the different Journals for the very kind and spontaneous notice they have taken of the proceedings of the Society, and that the Secretary do transmit this resolution to them.”

I have the honour to be, Sir,

Your obedient servant,

HENRY BOND,
Secretary.

MR. KING.

To the Editor of the *London Medical Gazette*.

SIR,

MR. EARLE having mentioned to me that the report of one of my speeches made on the hustings, in reply to Mr. Baker, at the late election for Coroner, contains expressions which he considers injurious to the character of the hospital surgeons, I lose no time in explaining that I did not intend to cast any imputation upon their private conduct. My observations were directed against the system of electing medical and surgical officers to our hospitals, which I consider unjust, and which, as far as my experience goes, they patronize.

I shall feel obliged by the immediate insertion of this communication, and have the honour to remain, Sir,

Your humble Servant,

T. KING.

10, Hanover-Street, Hanover-Square,
Oct. 28, 1830.

NOTICE.

We shall be much obliged to “Amicus” for what he offers.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 6, 1830.

LECTURES

ON

COMPARATIVE ANATOMY,

AS ILLUSTRATIVE OF

GENERAL AND HUMAN PHYSIOLOGY,

*Delivered in the Medical School of
Birmingham,*

By S. LANGSTON PARKER.

LECTURE III.

*The Spinal Cord—its strict relation to the
Organs of Locomotion in different Classes of
Animals.*

A DISTINCTIVE character of animals, and one which more particularly applies to the four classes of vertebrata, is their locomotive power; by the exercise of which they are enabled to move from place to place for the various purposes of pleasure and necessity. It is this property which is the peculiar feature of the animal existence, and without which they could not exist, since it is by the performance of this function the greater part are enabled to provide the materials required for their nutrition. By examining the different modes by which the vertebrata are enabled to carry on the performance of this property, we shall find that they are varied in every possible manner, their modifications coinciding with the medium they inhabit, whether air, earth, or water, and likewise with regard to the individual climate of the animal itself. The spinal cord is strictly allied in its variations to those of the development of the organs of locomotion. In the fœtus of all animals, before the appearance of the extremities, this organ is an uniform cylinder, extending from the superior to the inferior extremity of the vertebral canal, without any diversity in the diameter of its various parts. This is the disposition in reptiles, birds, the mammalia, and man. With the appearance of the extremities coincides that of the development of the enlargement of the spinal cord.

The inferior extremity is first perceptible on the sixth day in the class aves; at the same period the inferior enlargement of the spinal cord is manifest. The superior is not developed till the eighth day, at the same time appears the superior enlargement of the cord. With the progressive increase of the extremities, both upper and lower, strictly coincides the growth of the superior and inferior enlargements on the trajet of the spinal marrow. The same disposition is manifest in the classes of the reptilia and mammalia; the inferior extremity in all is first apparent, so is also the lower enlargement of the spine. They are developed always in a direct ratio with regard to each other; they appear together, are developed together, and diminish together in case of atrophy or paralysis of the locomotive organ. If the animal possess but two extremities, as the phoca, but one enlargement is found on the spinal cord. If one pair of extremities predominate over the other in the development of the motive apparatus, as the lower or inferior ones in the genus *lepus*, the excess of nervous matter is found appended to the corresponding enlargement. Among the reptilia and pisces we find numerous species which are deprived altogether of distinct or individual organs for locomotion, as the serpentia and eels: in these animals without lateral appendices for locomotion, the spinal cord is like the fœtus of the higher animals, before the development of the extremities, deprived of any enlargement on the cord, which is a single cylinder, of equal diameter throughout. We see, as we ascend the scale, fins added in the greater part of the pisces, and to each pair of these appendices we remark a corresponding enlargement of the spinal marrow, proportionate in its volume to the size and power of the fin. The trigla, or flying fish, and its varieties, in whom the power of the pectoral fin is carried to its maximum of development, is provided with a series of globular enlargements, corresponding to the number of rays forming the aggregate of the fin. This disposition I discovered likewise in

the gusnard, a fish remarkable for the immense power and size of the pectoral fin. We see the organs of motion varying among the pisces as it regards the position, or the absence of the fins; and the same taking place in the reptilia from the absence of feet, from the possession merely of one pair, or their more perfect or rudimentary state, and the number, position, and development of the spinal enlargements corresponding strictly with these dispositions. In the mammalia and birds, the number of motive appendices is more fixed; we have no examples in these classes of animals wanting either anterior or posterior extremities. In these classes the number of enlargements is uniformly the same, an inferior and a superior, one predominating over the other, as the superior extremity acquires its development over the inferior, as the wings over the legs in the birds of prey and the hirundines; or the reverse, as the legs over the wings in the cassowary, ostrich, and bustard. The enlargements are nearly similar in their development if the balance of power in the extremities is nearly uniform*; thus we see that there is an addition or increased deposition of nervous substance made in those parts of the spinal cord, corresponding to the excess of nervous action required or expended in distributing and preserving the sensitive and motive powers, and the four grand extremities or appendices of the trunk; and it is a law in the animal economy, that when one pair, or pairs of nerves, acquire a certain excess of development, corresponding to the degree of perfection of a general or special power or sense, that part of the nervous axis which gives insertion to the nerves is enlarged, to form a single or double lobe, elevated and distinct from the general nervous mass; as a greater degree of nervous energy is expended, a larger organ is necessary to secrete and furnish a greater supply.

In regard to the spinal marrow, with which we have at present solely to do, it is the cortical or cineritious substance that forms the principal part of the increased nervous matter in the spinal enlargements of the mammalia and man. We have seen, in our exposition of the formation of the two substances forming the spine, how erroneous was the opinion of Gall that the grey matter was the matrice or generative organ of the nerves; but his second deduction, from the disposition of the grey matter in the interior of the spine, is deserving of more consideration. He supposed that the grey matter exalted and gave tone to the expended nervous energy, and that it fortified or gave increased power to the functions of the nerve

which it supplied. When we consider the vast and overwhelming proportion of arterial blood received by the cortical substance of the brain and spinal cord, and call to recollection that the vital properties of a part are increased in direct proportion to the quantity of arterial blood which it receives, and that the reparation of its injuries and the performance of its functions is made with the greater rapidity, and exercised with the greater perfection in the same degree, it will be evident that the office of the local augmentation of grey matter in the spinal marrow to a greater or less degree, is to exalt and increase the nervous energy residing in the parts which it supplies, and likewise the more quickly to furnish a fresh supply where, from long-continued exertion, this energy has been expended. I need hardly remind you, that in addition to the superior and inferior grooves of the spinal cord, dividing it laterally into two equal parts, each of these is again subdivided by a faint fissure opposite the insertion of the ligamentum denticulatum into a superior and inferior half, thus making four equal divisions of the whole mass; the superior segments giving insertion, attachment, or origin to the posterior roots of the spinal nerves or those of sensation; whilst the inferior segments furnish the anterior roots, which are the conductors of the properties of motion. The posterior roots (provided with a ganglion, to which all the nervous filaments are united before the junction of the two roots to complete the trunk of the nerve) are considerably larger than the anterior. This double order of roots to complete the single nerve, which is then the conductor of a double function, is general throughout the whole range of vertebrata, excepting a few fishes and the serpents, who possess only the anterior order of roots.

The distinguished Semmerring remarked, that of all animals, man possesses the smallest spinal marrow and nerves in proportion to his cerebral mass; and that this centre becomes more voluminous, when compared to the brain, as we descend the animal series from man to the mammalia, birds, reptiles, and pisces. This fact shows us the predominance of the moral over the animal propensities in the higher animals, and the gradual decrease of one and elevation of the other as we descend the scale.

We hasten to consider another law not less interesting, viz. the relation existing between the excess of nervous matter in the muscular nerves, and the development of the muscular apparatus itself in the four classes.

We have said that the spinal cord was the centre of two functions, viz. sensation and motion, which are conducted by the nerves to the muscles of the animal life and the integuments of the body generally, the supe-

* Representations of the spinal cord in various animals, both in the adult and fetal state, will be found in the plates accompanying the respective works of Cuvier, Desmoulins, and Serres.

rior or dorsal half or segment being the seat of sensation, of that sensation I mean which is possessed by every part of the articular envelope, except the face, which is supplied by the fifth and seventh pair of cranial nerves; and the inferior or abdominal segment, being the residence of that muscular motion which is distinct from the action of respiration and the expression of the passions. We find the number of nerves and filaments forming them becoming more voluminous as the muscles have greater resistance to overcome in locomotion, or as the sensibility of the integuments is more exalted. The quantity of nervous energy required to produce locomotion is not equal, as might be supposed, to the mass of muscle to be supplied—it does not correspond to the quantity of muscles, but to the energy of their action; for instance, the class pisces, generally speaking, is that in which, in proportion to the other parts of the body, the muscular apparatus is most developed; an animal of this class contains three times more muscle, in the same sized body, than a bird or quadruped, and yet the inferior order of roots of the spinal nerves are less than those of any other class—in some instances their tenuity is strictly microscopic. Let us examine for a moment the mechanism of their motion: the fish, inhabiting a medium nearly equal in density to that of his own body, has need of very little exertion to preserve his equilibrium, which the greater part can vary at their pleasure, in compressing or dilating their air bladder, so as to regulate their position with regard to the depth of the water in which they move—the animal actually becomes lighter than the element which he traverses, and the slightest muscular effort is sufficient to enable him to move with ease and celerity through the element he inhabits; and for this purpose but a trivial proportion of nervous energy is required. He has only one action to perform, that of progression; whilst the resistance and weight to be overcome, in the quadruped and bird, is neutralised by the composition and density of the medium the fish inhabits, and the mechanism of the body, provided with internal reservoirs for containing air. In those pisces which, by a violent muscular exertion, are enabled to take a short flight, I have shewn you how the nervous energy is increased and fortified by the series of enlargements to which the nerves supplying the pectoral fins, which are productive of this motion, are attached. We see, then, that the anterior roots of the spinal nerves have two offices to perform in producing locomotion in different media: they have to preserve the equilibrium of the body, by effecting a certain degree of muscular contraction, as the station upon two or four feet in man, the mammalia, and birds, and likewise to effect progressive motion. The former of these functions is annihilated

in the fish, from causes we have mentioned; in the quadruped and the bird, the mass of muscles diminishes, the internal skeleton becomes larger, firmer, and more compact, as the sudden and energetic action of the muscles is increased, and the nervous system of muscular motion is more developed. These dispositions increase from the mammalia to birds, in whom the inferior, anterior, or abdominal order of spinal roots, arrives at its maximum of development. The quadruped or biped, in progressive motion, is assisted by the continued and repeated impulsions he impresses upon the solid bodies over which he travels, and does not require the muscular or nervous power possessed by the bird, who, on the contrary, in his flight moves through an element in which he can only be assisted by the repeated actions of his wings upon a fluid almost without resistance, and in which a vast increase of muscular, and consequently nervous energy, is necessary for his progression and support. The bird has, in addition to the locomotive property, to sustain his equilibrium at a great distance from the earth, in a rare medium, and an element many times lighter than his own body, which must necessarily require the most exalted power of muscular and nervous energy. These functions are provided for by the excess of nervous matter in the superior enlargement of the spinal cord, by the increased development of the anterior segment of the cord itself, and by the greater number of conductors of the motive property, in the filaments uniting to form the different trunks of the nerves.

The fish, then, has the largest muscular development, and the smallest quantity of nervous influence distributed to it, as the preservation of equilibrium in this class is dependent upon other causes than muscular action.

The bird has the smallest proportion of muscle, and the largest development of nerve and distribution of nervous influence; whilst man and the mammalia hold a middle rank, the proportion between the development of muscle and that of nerve being direct in the whole class.

We find the posterior or sensitive order of roots to be reduced in those animals where the sensitive or tactile function of the integument is diminished—as in birds, fish, and certain quadrupeds, in whom the body is covered with feathers, scales, or hair. In man, this order of roots acquires a marked development over the abdominal or motive, as the sensitive function of the skin is in him at its perfection of organization; whilst the anterior roots are much inferior in size and number to the posterior, as the motive power in man is inferior to that possessed by the greater part of the mammalia and birds.

The soft and pulpy structure of the animal nervous centres is such, that the least con-

cussion or compression upon any point of their course must impair or destroy, to a greater or less extent, the great functions of which they are the source, the loss of life itself being sooner or later the consequence. This lecture would, then, be incomplete without a general notice of the protecting membranes and osseous envelopes of the spinal cord. You are all aware that the spinal column is contained in a canal formed by the union of a certain number of short bones termed vertebrae, in the interior of which are found membranes, which invest more or less immediately the nervous structure of the spine itself.

The medullary mass of the cord does not more than half fill the osseous cavity formed by the vertebrae, and the remaining portion of the tube is filled with fluids of various density, to absorb and destroy the vibrations which might be transmitted to the cord from the shocks of external agents. The spinal cord of the mammalia and birds is surrounded by three membranes—the pia mater, the arachnoid, and the dura mater. The disposition of the first of these we noticed when speaking of the formation of the spine; the second, the arachnoid, is of the order of serous membranes, a shut sac, precisely analogous in its disposition to the pleura, pericardium, peritoneum, and tunica vaginalis, covering the convexity of the spine, and reflected over the branches of the nerves on their passage through the dura mater, in the same manner that the serous membrane is over the trunks of the aorta and pulmonary artery, on their exit from the fibrous bag of the pericardium; the third, and most external membrane, is the dura mater: this membrane is free, and floating in the cavity of the spine: its internal surface united to the external layer of the arachnoid, and its external furnishing a sheath to the trunks of the nerves as far as the vertebral foramina, where the dura mater becomes continuous with the internal periosteum.

The intervals between these membranes are not void, but filled with fluids to preserve the central position of the medullary cord, and to render null the actions of vibration upon the central mass. The space between the pia mater and the parietes of the vertebral canal is filled, in the mammalia and birds, with a layer of semifluid fat or medullary fluid, similar to that contained in the cavities of the long bones: this becomes the diverticulum for vibration, but as the molecules of this substance are not perfectly moveable on each other, the quantity of vibration transmitted to the cord must still be deleterious in producing concussion, were it not for a further provision. The cord is preserved in its central position, with regard to the vertebral canal, by the ligamentum dentatum, the points of which are attached to the length of the internal surface of the

dura mater, whilst the internal border is united with the surface of the spine itself, between the anterior and posterior roots of the spinal nerves. This interval or space between the internal surface of the dura mater and the spine is filled with a watery fluid, which surrounds and isolates the spine from all connexion with the action impressed upon the body by falls, leaps, or other violent motions. This fluid is not, as was supposed by Bichat, contained in the cavity of the arachnoid, as it then would but partially have surrounded the spine. It exists, as Magendie has proved, between the internal lamina of this membrane and the whole surface of the spine or membrane immediately investing it.

If the space between the dura mater and spine had been empty, the slightest vibrations would have been transmitted to the spinal column, and one or more of the slight attachments of the ligamentum dentatum would have been detached. This being the case, the spinal marrow would no longer have held the central position with regard to the parietes of the tube; it would have swayed in all directions with the motion of the trunk, and the least shock would have severed the pulpy attachments of the anterior or posterior roots of the spinal nerves, and consequently the animal must have been paralyzed from an arrest or total cessation of the transmissions of the motive and sensitive power.

In the class pisces, the mechanism for the protection of the spine is a little different; the dura mater does not exist, and all the space intervening between the osseous parietes of the column and its investing membranes is filled by semifluid oleaginous liquid, containing but a small proportion of water. Here, again, we see how admirably the structure of this class is adapted to the medium they are destined to inhabit. The fish, in traversing the depth of rivers or the sea, is not exposed to those sudden and violent actions from external agents, which are received by the quadruped and the bird: his motion is easy and uniform, whilst that of the latter animals is abrupt and varied, from the nature of their respective elements. The fish is consequently not so much affected by the shocks of external agents, and the investing fluid of his spinal marrow admits of more density than would be safe or practicable in that protecting the column of man, the mammalia, and birds.

An incompressible fluid, then, of which the molecules are more or less completely moveable on each other, in filling the cavity of the vertebral canal in the mammalia and birds, preserves the position of the spine, with regard to the axis of the canal, invariable, since it is maintained in this situation by the attachments of the ligamentum dentatum. The water, by absorbing the vibra-

tions, renders their action upon the marrow itself null or indistinct: this fluid likewise, in supporting the attachments of the ligamentum dentatum, gives it a power and firmness not to be expected from its texture or organization. This object is likewise accomplished in the pisces by the oily fluid investing and protecting their spinal cord. I can illustrate this subject by a comparison with which all are familiar:—open a fresh egg, and you will see the yolk, in whatever position the egg may be placed, preserved in its central situation by the attachment of the chalazæ to the membrane of the white lining the shell. This comparison is strict; there is here no forced analogy, and I know of no two subjects or things in which the resemblance is more striking. From the nature of their motions, the fluid occupying the spinal canal of the mammalia is found in greater quantities than that in the canal of birds. The limits of this lecture will not permit me to enter into a dissertation of the various motions of animals from which the spine would require a greater or less degree of protection; we must reserve it for a future period; and the only point which remains to be considered is, the relation in size and figure existing between the osseous parietes of the vertebral column and the substance of the spine itself.

The region of the vertebræ in all animals is divided into three parts—the cervical, the dorsal, and the lumbar, each part admitting of a variable degree of motion. In the mammalia and birds, the only two classes we shall notice on this subject, the cervical division of the spine is that in which the vertebral canal is invariably the largest, the extent of motion of the individual vertebræ upon each other is greatest, and the movements of the whole chain most varied and extensive. A considerable space intervenes in this region between the osseous parietes of the canal and the spine itself—a space double the size of that existing in either the dorsal or lumbar regions. It was necessary in the cervical chain of bones to allow of great motion, and at the same time to construct a mechanism that should act without compressing or injuring the medullary cord within. This is produced by the immense size of the vertebral canal in this region, in proportion to the contained medullary column. The vertebral canal in the cervical region is not uniform, but undergoes a series of dilatations and contractions, the centre passage through each individual bone being narrower than that portion opposite to the articulations or junctions of one bone with the other. This is particularly exemplified in the structure of the cervical vertebræ of birds, the canal in each bone resembling an hour-glass, the contracted part in the middle closely enveloping the cord; this mechanism allowing the greatest possible degree

of motion, and at the same time providing for any undue pressure upon the spinal column. I stated in my introductory lecture, that the great object of comparative anatomy to the physiologist was the unravelling of obscure structures in some animals, as in man, by a study of these same parts in other animals, where the disposition was more evident, and formed upon a plan more unequivocally adapted for the performance and production of a certain object. This is particularly the case in the structure of the cervical region of the vertebral column of birds, the object being to allow of great motion in the part, and at the same time to preserve the medullary cord within from the least pressure or injury. The motions of the neck in this class are carried to the very acmé of perfection in the variety and elegance of the movements, of which this part is susceptible, in the swan and many other birds. Where the most extensive degree of motion is allowed in the spine, the nature of the structure for the protection of the central mass must be most evident.

“Unlike the vertebræ in man and the mammalia, these bones are in birds articulated by complicated joints, situated at the superior and inferior surface of the central portions of the body of the bone, and bearing a close resemblance to the articulation of the humerus with the ulna in man, differing, however, in the former having a lateral motion allowed; the vertebræ in birds admitting of lateral movement, as well as flexion and extension. The varying position of these articular surfaces is greatly favoured by the interposition of an interarticular cartilage, adapted to the surface of each bone, and having a double synovial membrane, similar to the articulation of the condyloid process of the lower jaw in man. This mechanism allows of a motion of flexion of the neck nearly to a right angle, and to a lateral one of 45°, without undue pressure, or the least injury to the spinal cord within*.”

From the mechanism of this structure its use is obvious, and it becomes more so when we compare the cervical with the dorsal and lumbar regions. In the dorsal portion, strength is the great object in the structure of the column; little movement is allowed, neither is it necessary. In this class the whole series of spinous and transverse processes are frequently converted into one mass by ossification. The canal closely envelopes the spinal marrow, little or no space intervening. In the lumbar region, the canal again slightly dilates, to allow the performance of a slight degree of motion, more evident and necessary in the mammalia than birds. In man and the mammalia the disposition is similar, and varies only with the degree of motion requisite to be produced.

* Earle, in Philosophical Transactions.

The cervical canal is most capacious, the degree of motion most extensive; the dorsal the most contracted, the power of motion least evident, the lumbar region holding a middle rank between the two. In a pathological point of view, this structure makes it manifest that the slightest pressure or extravasation in the dorsal region of the spine is immediately productive of serious consequences, from the canal being more immediately filled with the spinal marrow and its membranes. Effusion in the cervical or lumbar regions, on the contrary, may exist to a considerable extent, and for a greater length of time, without producing any symptoms by which it may be recognised. These facts will be fully appreciated by attention to diseases of the spine generally, and much light will be consequently thrown on its otherwise obscure pathology.

The deductions which may be made from these points, in the structure of animal, to illustrate human physiology, are the following:—

1st. The lateral nerves of the cerebro-spinal system are formed before the brain and spinal cord, to which centres they are not appended till a late period of gestation.

2d. The white or medullary matter of the spinal column is formed before the grey, and therefore this latter part cannot be the matrix of the nerves, as was supposed by Gall.

3d. The grey matter, though not the matrix of the nerves, is the organ from which the nervous influence is renewed when it has been expended in the functions of sensation and motion.

4th. The canal of the spinal marrow never exists in the adult human subject, as asserted by some anatomists, except as an indication of congenital disease.

5th. The fluid contained in the tumor covering the spina bifida, in certain cases, communicates with the canal of the spinal marrow.

6th. The cauda equina is formed by the ascent of the spine in the vertebral column during gestation.

7th. The increased depositions of grey substance in the superior and inferior enlargements of the spinal cord, are for the purpose of supplying the increased proportion of the nervous energy expended in the nerves of the superior and inferior extremities.

8th. The quantity of nervous influence distributed to the muscles is not in proportion to their number or volume, but in direct ratio with their energy and force of action.

9th. The canal in the different regions of the vertebral column is more dilated in those parts where the greatest degree of motion is required. It is more contracted, on the contrary, where strength, and not motion, is to be obtained.

TRIAL OF MR. ST. JOHN LONG FOR MANSLAUGHTER*.

OLD BAILEY, SATURDAY, OCT. 30, 1830.

THIS morning, at nine o'clock, the prisoner *John St. John Long* was placed at the bar to take his trial upon the charge of having killed and slain Miss Catherine Cashin. The indictment stated that he, with a certain inflammatory and dangerous liquid, secretly prepared and mixed by himself, did feloniously rub, wash, and sponge the back of Miss Cashin, or did cause and procure the same to be rubbed, washed, and sponged, he well knowing the said liquid to be inflammatory and dangerous; and that by such rubbing he did cause, give, and procure to be given, one mortal inflammation and wound upon her back, of the length of eight inches, of the width of four inches, and of the depth of two inches; and that, by means of such rubbing, &c. he did feloniously cause and procure her to become mortally sick and diseased; and that of said sickness and wound she languished from the 3d of August till the 17th, and that on the latter day she did die.

The prisoner on being arraigned exhibited a good deal of apparent indifference, and pleaded Not Guilty.

The Counsel for the prosecution were Messrs. Alley and Phillips; and for the defence, Messrs. Gurney, Serjeant Andrews, and Adolphus.

Mr. PHILLIPS opened the indictment.

Mr. ALLEY stated the case: after a long practice, and the most serious consideration, this he regarded as one of the most important in which he had ever been engaged. Miss Cashin was a young lady of considerable fortune, and resided in Ireland. Her sister had been ill. She came to this country in June last with her mother and sister, and took a lodging in the Hampstead-road, both for the benefit of the air, and that they might be near the residence of the prisoner, which was then in Harley-street, New-road. The sister went to the prisoner to be under his care, and was accompanied by the deceased, Miss Catherine Cashin. Miss C. Cashin was in the most perfect health before she left Ireland, as her brother, now in court, would prove. She had not long continued to accompany her sister until the prisoner informed her that unless she also submitted to his operations, in less than two months she would be in a deep decline. This alarmed both the deceased (whose death occasioned the present inquiry) and her mother. She resisted the idea of it. He repented his statement over and over again, and, after many urgent importunities on his

* Our account of the trial is taken from the Sun and Times newspapers.

part, she yielded, and allowed him to practice on her person, and he produced that wound on her back which had indisputably occasioned her death. The learned Counsel went over the particulars. The Coroner's Jury had found a verdict of Manslaughter against the prisoner, and the Grand Jury had confirmed their finding by returning a verdict that he had, by assaulting, &c. produced her death. Although the application had not been applied, nor the rubbing made, by the prisoner himself, he was equally guilty, for the whole had been done under his direction, and by his servant. He (the learned Counsel) did not mean to claim any thing on the ground of the prisoner not being a legally authorised practitioner; but the law was, that if an act done heedlessly and incautiously produced death, the party was guilty of manslaughter. So, again, let the man be who he might, if a lawful act was imprudently, improperly, and irregularly done, it became unlawful conduct; and notwithstanding the prisoner intended to make it appear it was at the request of the deceased that he practised upon her, yet no person could give consent to the performance of an unlawful act; and after all the facts were proved, it would be for the Jurors to put their hands upon their hearts and say whether or not the prisoner's conduct had been lawful.

Mrs. Mary Ann Roddis sworn and examined by Mr. Phillips.—Was the wife of Mr. George Roddis, of 32, Mornington-place, Hampstead-road. Remembered, in the month of June last, ladies of the name of Cashin coming to her house to lodge; the name of the eldest daughter was Catherine; she came on the 26th June. At that time Miss C. Cashin appeared to be in perfect health; she continued so until within about four or five days of the time when I went with her to Mr. Long's. On Friday, 13th August, I went with her to Mr. Long's; he lived then at 41, Harley-street. I saw Mr. Long; the young lady was with me; she introduced me to Miss Long. Mrs. Cashin requested me on the morning, as a favour, to accompany Miss Cashin, and express to him her fears respecting the wound on her daughter's back; I did so to Mr. Long. He did not look at her back before me; he said "Miss Cashin must go and inhale," afterwards he would look at her back. I went with her during the time she inhaled; and after that Mr. Long had been in another room. The process of inhaling was this—when I went into the room, there appeared to me to be two cabinet pianos; each lady had a pipe about a yard and a half long, and put it to the orifice in the machine, opposite to which she placed a chair, and applying the pipe to the orifice, inhaled, the other ends being in their mouths. I should think there were eight or ten ladies inhaling at the time.

Miss Cashin was from half an hour to three quarters inhaling. After she had inhaled, she went into a room down stairs, into which I did not go. I saw Mr. Long as I and Miss Cashin were going to our chariot, after Miss Cashin had been in the room with him. As we were going to return, Mr. Long expressed a wish that Miss Cashin would not omit going every day to his house for the purpose of inhaling. He said that she would be quite well in a few days, in reply to something I said to him about the wound. We then went back to my house. On the next day (14th of August) my attention was particularly directed to Miss Cashin. In consequence of something she and Mrs. Cashin said to me, I wrote to the prisoner. In the evening of that day, between five and six o'clock, he came to my house; he saw the deceased in my presence; he, in my presence, examined the state of the wound on the back; after he did so, he said it was in a beautiful state, and that he would give 100 guineas if he could produce a similar wound upon the persons of some other of his patients. I directed his attention to a particular portion of the wound, which presented a dark inflamed appearance. He said it was the consequence of inhaling, and unless those consequences were produced, he could expect no beneficial result. The wound and inflammation at this time appeared to be about six inches square. I told him I had applied a poultice of bread and water, with a large portion of hog's lard, and that I had given her saline draughts. He said I had done very wisely. I asked him what was to be done to allay the irritation of the stomach? He said he had heard of none. I told him that in my note I had expressed the words "unceasing sickness." He said I did not, but on referring to the note which he had with him, he found that I had stated it. He observed, the sickness was of no consequence, but on the contrary a benefit. I begged that he would order something to quiet the stomach and bowels. He said it was all the consequence of inhaling, and that those symptoms combined with the wound, were proofs that his system was taking due effect. I begged of him to give her a composing draught. He answered that a tumbler of mulled port wine was a better composing draught than all the doctors in the world could give, for that he hated the very name of physic. On the staircase he requested that I would expose the wound to the air. He told me to administer the mulled port wine; I objected to it, but he insisted upon its being given. I gave her a wine-glass full, which was immediately rejected by the stomach. When he directed the wound to be exposed to the air, he also directed me to lay a piece of linen on it, and keep applying a quantity of cream to it. I said, that to expose a wound

like that to the air would produce madness almost. He observed that, on reconsidering, there could not be a better application than the poultice I had already applied; therefore he requested I would continue it, and that he should rely upon my judgment for an account of the wound on the following morning. He stated, that as I had always applied the poultices I should be better able to form a correct opinion than he could; he then took his leave. I acted as he desired, by applying the poultice. Miss Cashin continued to get worse. On the following morning, Sunday the 15th, about noon, I saw the prisoner next at my house. He went into Miss Cashin's bed-room. I, with Mrs. Cashin, was also there. Miss Cashin was in bed. On going into the room, he very hastily took off his coat and threw it upon the bed, requesting some soft dry linen to be procured. Before he pulled his coat off, he asked me how Miss Cashin was, and I said she was worse. After ordering the linen, he very unceremoniously stripped off her night-clothes. He did this very rudely. I begged he would step aside until I removed the poultice. Miss Cashin said, "Indeed, Mr. Long, you shall not touch my back again; it is horrible this state into which you have brought me. You very well know that when I became your patient I was in perfect health, but now you are killing me." Mr. Long replied, "Whatever inconvenience you are now suffering, it will be of short duration, for that in two or three days you will be in better health than you ever were in your life:" again repeating his utmost confidence that the result of his system would be to prolong her life. He then put on his coat, and Mrs. Cashin said, "I thought you were going to do something to Catharine's back?" He said that in two months she would have been seized with consumption. He said, alluding to the stomach and bowels, those were the symptoms he would wish to produce, and that they were the proofs of the seeds of consumption in her. He said, in answer to what Mrs. Cashin had said, no person could be doing better than what Miss Cashin was. I pointed out to him at this meeting again the same spot in the wound that I had pointed out on the Saturday. The spot was then darker, and the wound had materially extended in that interval. He said that probably a number of boils would come out, which would be the consequence of inhaling, and what he should wish to see produced; he added that she was going on uncommonly well. The linen had been brought as desired. He made no use whatever of it. During the whole of this time the wound was lying exposed, and which must have been from ten to fifteen minutes. Mrs. Cashin joined me again in pressing the sickness upon his attention. He said he had a remedy with him that would stay

the sickness, but that he would not then apply it, saying it would be of ultimate benefit to her, and that he liked the sickness. Mrs. Cashin said, "Good God! Mr. Long, why don't you now apply it?" He said he did not wish the sickness to be stayed; he had had a lady who had had sickness for six weeks, and that she was better for it. He said that our fears were perfectly groundless, for that no person could be doing better than Miss Cashin was. I then named the irritation of the bowels, and he ordered her to have some rhubarb and magnesia. On going away he said, if the sickness was not over by eleven or twelve o'clock at night, he would call and give her something to stop it. Miss Cashin died at about ten on the Tuesday morning following. He did call again on the Sunday night, between eleven and twelve. The sickness continued. He gave her some medicine which he brought with him. It was thrown off the stomach before he left the room. In the morning (Sunday) he said he was going to Richmond to spend the day, and that he should call on his return. Miss Cashin presented in the morning a very disturbed and restless appearance; she was tumbling and tossing about the bed. She got gradually worse between the morning and when the prisoner called at night. I told him then that I thought the nervous system was so much affected that something ought to be done; that probably some medicine might be given to relieve her. He said my fears were perfectly groundless—they arose from my ignorance of his system, and that she would be perfectly well in two or three days. The prisoner then took his leave. I was with Miss Cashin that night till past two o'clock; we were constantly removing her pillow—her distress was extreme. In the course of the next day (Monday) he called twice of his own accord. I did not see him, when he called in the morning, with Miss Cashin, but I waited in the drawing-room to ask him how she was. This was at nine o'clock, and he said she was doing uncommonly well. She continued from this time getting gradually worse during the day. Mr. Brodie was sent for in consequence of her appearance on the Monday. Mr. Brodie came, and saw her at about six on the Monday evening. Mr. Brodie ordered a poultice and saline draught, which were administered, and Miss Cashin for a time was a little relieved. After Mr. Brodie had seen her, in about an hour, the prisoner called. I saw him, but did not speak to him.

By Mr. Justice PARK.—Could not tell whether Mr. Brodie's prescription had been administered before the prisoner called.

By Mr. Phillips.—Miss Cashin passed the night very badly. I saw her at half-past seven on the Tuesday morning. I then gave her a saline draught according to Mr. Brodie's prescription. In about half an hour or three-

quarters afterwards I gave her a cup of coffee and some dry toast. The prisoner had not at all interdicted Miss Cashin from any particular kind of food. In the course of his attendance he said his patients might eat or drink whatever they liked without restriction. When I gave her the coffee I left her. She was then extremely pale, and looking very ill. When I was at breakfast on the same morning the bell rung violently, and there was a great thumping on the floor. I ran immediately up stairs, and found her dying. I tried to get a tea-spoonful of brandy into her mouth, but her jaws were quite set, and she was dead. Another surgeon in the neighbourhood, on the alarming symptoms appearing, was sent for, but she was dead before he arrived. At about ten on the Tuesday morning she died. I did not hear the prisoner informed on the Tuesday evening that Mr. Brodie had seen Miss Cashin. Mrs. Cashin is at present in Ireland.

By Mr. Justice PARK.—Two young ladies came from Ireland with the mother, Mrs. Cashin. The one whose death occasions this inquiry was the oldest; the other was in ill health, and had been a patient of the prisoner's before Miss C. Cashin became a patient. Miss Cashin was his patient for four or five days before I went with her to him.

Mr. *Patrick Sweetman* sworn, and examined by Mr. Alley.—I live in Dublin. I married Miss Cashin's sister. In consequence of a letter I received from Miss Cashin I came to this country; she came here about seven weeks before I did; she was then in good health; I communicated the contents of the letter to the prisoner; I arrived here on the Saturday previous to her death, at about six in the evening; I saw her immediately; I saw the prisoner in the course of the same evening; I asked him what he thought of Miss Cashin. He replied that she was doing remarkably well, and just as he wished her to be. I remarked to him something about the state of her stomach. He said that would get well of itself. I heard a conversation between him and Mrs. Roddis after he left the room. Mrs. Roddis asked if something ought not to be done to the wound on the back? He said it ought to be exposed to the air. Mrs. Roddis observed that she thought something should be put to it; he said if there must be something put, put a little cold cream, and stop it up with linen from time to time. Mrs. Roddis said she could not bear that. He then said, what would you put? She said she had applied a poultice in the morning, which had given relief. I breakfasted with him next morning (Sunday); I told him I had come from Ireland to inquire into the state of the health of the two Miss Cashins. He told me with regard to Miss C. Cashin, her friends need be under no apprehension, for that her back was in that state he wished it to be, and that

there were many of his patients who would be glad to have had such a scar. Her stomach would get well of itself. He told me that a young lady, a patient of his, asked him what he thought of Miss Cashin, and he told the young lady unless she (Miss Cashin) put herself under his care she would die of consumption in two or three months. The young lady told Mrs. Cashin (the mother) the conversation she had had with the prisoner; the consequence was, that Mrs. Cashin put Miss Cashin under his course of treatment, hoping to prevent her having consumption. He told me as to his treatment; that he rubbed a mixture sometimes on the back, sometimes on the chest, sometimes on the head, and on the eyes also. He told me this had been done to Miss Cashin. He produced a book, and wished me to sign it. I read it. It required me not to divulge what the mixture was, either in colour or in any other respect. I said that I had no objection to sign it. I could not divulge it, for I had not seen it. A gentleman present said the signing of the book was all nonsense; nothing was said in his presence about the fee. Mrs. Cashin is now in Ireland.

Cross-examined by Mr. Gurney.—Mrs. Cashin and the deceased came to this country to put the younger sister under the care of the prisoner. The mother considered the younger daughter to be in a consumption. Mrs. Cashin's son died of a similar complaint about a year before, at the age of 19, in Lyons. Miss Cashin was 24, and the younger sister about 17 years old.

Mr. *Benj. Collins Brodie* sworn and examined by Mr. Phillips.—I am a surgeon of St. George's Hospital. Remembers going to see Miss Cashin. Saw her. She was at the time confined to her bed. It was between five and six in the evening. I examined the person of the young lady. I found her back extremely inflamed. The extent of inflammation was about the size of a common plate. In the centre of the inflamed part there was a part about the size of the palm of my hand which was dead, and in a state of slough or mortification. She was also suffering excessively from incessant sickness. I was informed that nothing would remain upon her stomach. I prescribed some medicine for her to take, merely with a view to allay the sickness; nothing further could be done at that time, and ordered that a poultice should be applied to the back. I believe it had been poulticed before. I thought her very ill indeed, though I did not at that time think her in such immediate danger as it turned out she was. It seemed as if some very powerful stimulating liniment had been applied to the back. I called at the house on the following afternoon, and found she had died in the morning. I should think it was quite absurd to think of administering a tumbler of mulled wine on the

day before her death from the state in which I saw her.

Cross-examined by Mr. Gurney.—When I arrived at the house on the next day I did not expect her to be dead. Mortification had extended in the course of the night very rapidly. I saw the back after death. Counter-irritation is very common in curing diseases—a blister is a counter-irritation. Those things that are made use of for the purpose of causing it have different effects on different individuals; I have known an application that would produce very great disturbance in the constitution of one, when it would not do so in that of another. The appearance of mortification would not alter after death.

Re-examined.—There are means to be used by professional gentlemen for checking counter-irritation should it go too far, and all counter-irritants should be used with discretion. I should certainly not think it right to apply such a stimulating liniment to the back of a person in perfect health, that would produce such a wound as I saw, and I doubt much whether any of the stimulating liniments in common use would produce the same effects—the same extensive mischief. I mean by that to include the constitutional effects and the local injury. I regard the sickness and vomiting to have been as much the effect of what had been done as the mortification. Had the stimulating liniment not been applied to the back there would have been no sickness and vomiting.

By Mr. Baron Garrow.—I think the application of a liniment that could produce such an effect applied to the back of a lady like Miss Cashin, in perfect health, was calculated to bring on serious constitutional derangement and danger; and it has fallen to my lot to see another case very similar to Miss Cashin's. There is great difference in the constitution of individuals, and I don't mean to say such application would produce the same effect on all.

By Mr. Justice PARK.—I have not known the application of strong stimulants to produce counter-irritation, where there was only apprehended consumption; I knew nothing of Miss Cashin before this; the spot of black in the wound was as large as the palm of my hand when I saw the wound first; if the stomach would have borne it, wine properly administered would not have been improper to have given to the patient with the state of back that I saw. I did not attend the examinations of the body after death. The appearances I saw on the back were quite sufficient to cause death. I can say nothing about the cause of the appearances, except what I was told by those whom I saw in the house.

Dr. Alexander Thomson sworn, and examined by Mr. Alley.—I am a bachelor of medicine—(a Doctor by courtesy.) I have

been at the house of Mrs. Roddis. I saw the body of the deceased there. I was there on the Sunday morning after the death. I examined the wound that was on her back. I concur in what Mr. Brodie has said as to his opinion of the state of the body. I went afterwards to the vault and saw the body. The body that I saw in the vault was the same which I had seen at Mrs. Roddis's.

Mr. Thomas King sworn, and examined by Mr. Phillips.—I attended the examination of the body after it had been buried. I observed the state of the back. There was a piece of disorganized skin, which we call an *eschar*, and which Mr. Brodie has just called a *slough*. It was about the size of the crown of a hat. The parts immediately beneath the skin were gorged with serum. The holding of a hot iron at about a quarter of an inch from the skin for a considerable time would produce such an *eschar*. By an *eschar*, I mean a dead portion of organized skin. I examined the body with many others, with a view to discover whether or not there was any latent disease, but we could discover none, nor any seeds whatever of latent disease. The muscles and the whole of the body were in a healthy state.

James Johnson, M.D. sworn, and examined by Mr. Alley.—I was present at the examination of the body in the vault, and it was healthy in every respect. There was no evidence of disease whatever. The brain and spinal marrow were healthy in every respect—indeed no seeds of disease were traceable in any part beyond what proceeded from the wound.

Dr. John Hogg sworn, and examined by Mr. Phillips.—I attended the examination in the vault. The wound on the back had an appearance as if it had been produced by fire or gunpowder. I can conceive no state in a healthy body where the application of any thing that could produce such a sore could be of service. The sheath of the spinal marrow was discoloured opposite the external wound. The inference I draw from that is, that there must have been very great constitutional disturbance produced by the wound.

By Mr. Justice PARK.—I stated before the coroner that it was difficult for me to assign the cause of death, but I had not then heard Dr. Thomson's first examination of the body detailed. I said that such violence done to the nervous system, (particularly in a young and delicate lady) as the local injury must have produced, was sufficient to cause death.

Dr. Goodeve sworn, and examined by Mr. Alley.—He attended the examination at the vault, and corroborated the former evidence as to the appearances of the body. He would not have produced such a wound on the person of any patient.

Allice Dyle sworn, and examined by Mr.

Phillips.—I am the servant of the prisoner. I have been so for the last six months. I remember Miss Cashin, who was a patient of the prisoner's. Both the Misses Cashin attended. On the third of August I rubbed some liquid on the back of Miss Catherine Cashin by the prisoner's order; that was the first day on which I rubbed Miss Cashin. I never rubbed her but that one time. I do not know what that liquid was composed of.

Cross-examined by Mr. GURNEY.—The prisoner had a great many patients; many of them were persons of rank. I was employed to rub the ladies. I used to take the lady to be rubbed behind a screen, and separate her from the rest in the room. The rubbing was done for the purpose of producing a sore or discharge. She came day by day, after she had been rubbed, to be dressed. I washed round it with a lotion when she so came. I rubbed her with the same lotion with which I rubbed other persons, and I washed her with the same lotion that I washed other persons with. This did not produce a greater discharge from the back of Miss Cashin than it did from the bodies of others to whom the liquid was applied. I dressed it every day. The wound did not put on a more angry appearance than other wounds did. I poured the lotion out of the same bottle that I poured it out of for others. On one day, when Miss Cashin was there, the Marchioness of Ormond was there with her daughter Lady Harriet Butler; I rubbed Lady Harriet Butler with the same lotion. Miss Otley and Miss Roxborough were also present, and were rubbed. The washing of the wound round was not to produce a sore. The wound was dressed with a cabbage-leaf. Mrs. Cashin, the mother, used generally to come with Miss Cashin.

Re-examined by Mr. Phillips.—There were not two bottles used, only one. The same lotion I used to wash the back with was the same lotion that used to produce the sore. The mother and sister were in the room when I rubbed Miss Cashin. When I had done rubbing patients I kept the bottle to rub others with; when it was empty I returned it to my master for him to put some more into it. On the 14th of August the wound was not bigger than the palm of my hand, and not larger than was on other ladies. It was rather red in appearance.

By Mr. Justice PARK.—The lotion produced no sore, except when I rubbed it. I rubbed with a sponge. I have seen ladies wash their hands with the lotion.

This closed the case for the prosecution.

Mr. GURNEY submitted that there was no case to go to the Jury; there was no evidence to show that the deceased had been in any respect differently treated from the other patients in attendance upon Mr. Long. He had applied to her the same remedy

which he had applied in other cases, and which had been so applied with the most complete success.

Mr. Serjeant ANDREWS followed Mr. Gurney on the same side, pressing upon the attention of the Court the view that Lord Hale and Mr. Justice Blackstone took of cases of medical practice, observing, that however liable formerly to actions, if not regularly licensed, medical practitioners could not be found guilty of manslaughter. The question which he conceived presented itself to the Court was, whether or not Mr. Long had assiduously used those remedies which his means and education enabled him. If he acted *bonâ fide*, however mistaken, he could not be held as having committed a criminal act.

Mr. ADOLPHUS followed on the same side.

Mr. Justice PARK said that he had consulted with his learned brother, and found that their views of the case did not coincide upon the whole matter; therefore he should not feel himself justified in stopping the case.

Mr. Baron GARROW observed, that he felt bound to state his impression respecting the present case. It was his opinion that if, upon the facts of the case, it did turn out that the verdict of the Jury was unfavourable to the prisoner, the question of law ought to be submitted to the solemn adjudication of the congregated wisdom of all the Judges. At that stage of the trial, he would himself recommend that the opinion of the Jury be taken upon the question of fact, and leave to the Judges at large to decide the question of law. Adverting to the case of Mr. Van Butchell, he observed that Mr. Baron HULLOCK was perfectly right in stopping the case. There excellent grounds existed for his doing so, which did by no means apply to that then before the Jury; and it was further to be remembered, that in Mr. Van Butchell's case no third person was present during the application of the remedies or the performance of the operation. When he considered the several authorities affecting the present question, he must say that there was not the slightest distinction between the conduct of the most eminent physician or surgeon, or the poorest, humblest, and least educated man in the community. No matter whether prejudice, ignorance, or poverty, brought his patients to Mr. Long, he must stand in a court of criminal judicature exactly in the same situation as would the President of the College of Physicians, or the President of the College of Surgeons; the humblest and the highest ought to occupy precisely the same situation; the only question was, whether the prisoner at the bar had used sufficient care and diligence in the application of a remedy which he apparently believed to be efficacious. Were he drunk, or did he do that which on the face of it could not fail to be mischievous, the law would hold him to have

acted criminally; but his (Baron Garrow's) reading of the law was, that the humblest bone-setter in the remotest village stood in the same situation, in regard to a criminal prosecution, as if he were the president of the most distinguished college in the united kingdom. It was in the highest degree important that the law should be settled, if any doubt existed on the subject, and so it would be if, upon a consideration of the facts, the jury thought the conduct of Mr. Long culpable.

Mr. Justice PARK then asked the prisoner if he had any thing to address to the jury. A written defence was put in, which the officer of the court read to the jury. It set forth that the mother of the deceased brought her to him—that a younger sister of Miss Cashin had been labouring under pulmonary consumption—that he administered to the deceased the same remedy that had been found efficacious in other cases—that he had many witnesses in court to prove that he had treated a variety of cases with the most complete success which had been considered hopeless, and that the unfortunate failure which occasioned the death of Miss Cashin was of a nature by no means unfrequent in the course of medical practice. He complained of the effect produced against him by statements and commentaries made through the medium of the public press, and prayed the jury to discharge from their minds any feelings which such publications might have created.

The Marchioness of Ormonde.—Three of my daughters were under Mr. Long's care; the one five months, the others four. I was perfectly satisfied with his care and attention.

By the COURT.—I attended with the first of my daughters three or four months before I brought the other.

Lord Ingestre.—I was under Mr. Long's care for five months, and was perfectly satisfied with his skill, attention, and humanity.

The Marquis of Sligo, four months under Mr. Long's care, deposed that he never saw nor heard of a medical practitioner more kind-hearted, attentive, or humane.

Mrs. Webb, Miss Gregory, Mrs. Swinland, Colonel Campbell, Mr. Porter (formerly Surgeon-General of Jamaica), General Sharpe, Mr. Prendergast, Mr. Abington, Mrs. Ashworth, and Mrs. Macdougall, gave similar testimony; as did Mr. Pemberton, who produced his child, one of Mr. Long's patients. There were also examined, to the same effect, and with like results, Mr. Braithwaite, Miss Grindlay, Miss Roxburgh, Mr. Synge, Mr. Southerby, Mr. Roxburgh, Mrs. Prendergast, Mr. Francis Roxburgh, Mr. George Manley, and others, to the number of nine-and-twenty.

Mr. Justice PARK then proceeded to sum up. He requested the jury to discharge

from their minds any thing they might have heard out of doors on the subject of the accusation under which the gentleman at the bar then stood. No doubt the publications that had appeared respecting it were such as might have the effect of influencing the minds of juries, if they did not labour to free themselves from the prejudice which might be so created. Not that he meant to impute to those by whom the public press was conducted any intention of doing a disservice to Mr. Long; on the contrary, he felt perfectly satisfied that they were men of too much honour and probity to entertain any such intention. He was sure not one of them put forward such publications with the view of running down an individual. The jury whom he then addressed would, he was sure, remember that they were acting under the solemn sanction of an oath, and would feel it their bounden duty not to allow themselves to be influenced one way or the other, but to give a dispassionate consideration to the case brought before them. For himself, he knew nothing whatever about the case except what he had learnt that day in court, and what he had heard from the depositions laid before him. He was, at the time of the inquest, in a distant part of the country—his mind occupied with other matters; and supposing, as he had a right to do, that the case would not come before him, but before those of his learned brethren who had presided at the September Sessions, he had, therefore, not the slightest acquaintance with the case, except what was derived from the depositions, and what he had that day heard in court. He could not let pass that opportunity of saying that he had always thought, ever since he had the power of thinking, that there could not be a more dangerous error than to permit the previous publication of evidence afterwards to come before a jury. It was, in many cases, impossible for the most honest and upright mind to divest itself of prejudice; but were it possible in all cases—and he hoped it was—it would be highly desirable for a jury to divest themselves of every sort of previous knowledge; above all, they were bound to remember that they had nothing whatever to do with the verdict of the coroner's jury or of the grand jury. Doubtless, the matter could not come before them without a verdict of some sort; but it was to be observed that the evidence upon which the grand jury found their bill was far short of what came before a petit jury for their decision. He could not help saying that he thought it unfortunate the counsel for the prisoner should have sought for an immediate acquittal before the defence was entered on, because it led to an apparent difference of opinion between him and his learned brother; their difference was not so much as to the law of the case, as with respect to the course which

it was then expedient to pursue. He held, and he believed there could be no second opinion amongst lawyers on the subject, that nothing but the grossest ignorance, or the most criminal inattention, could render any man, licensed or unlicensed, amenable for his medical practice to a court of criminal judicature. He then read over his notes to the jury, who immediately retired to consider their verdict.

A little after 7 o'clock Mr. Justice PARK again entered the court, and ordered the jury to be called, apparently with an intention, if they had not agreed in their verdict, to apprise them of his wish to retire for the night, and that they must therefore be locked up until Monday morning. The jury did not immediately obey the summons, but in the course of about five minutes they returned into the box, and were then asked if they had as yet agreed on their verdict?

The Foreman instantly answered—Yes, and that they found the prisoner *guilty*.

The expression of this opinion, so different from what was anticipated by the audience in court, from the summing up of the learned Judge, excited very great surprise, and several persons gave utterance very audibly to their feelings of satisfaction.

Mr. Justice PARK promptly reminded them of the necessity of conducting themselves with decorum in a court of justice, and his determination to punish those who repeated the offence.

His Lordship, who seemed to be very little prepared for such a verdict, then consulted for a few minutes, in great apparent earnestness, with the Recorder, and immediately afterwards begged the Sheriff to request the attendance of his brother Garrow.

Mr. Baron Garrow, the Sheriffs, and a number of Aldermen and Magistrates, then entered the court; and a consultation between the two learned Judges and the Recorder was then renewed for several minutes. At its conclusion,

Mr. Justice PARK addressed the counsel for the prisoner, and observed, that, under the peculiar circumstances of the case, he and his learned brother had agreed to defer passing judgment on the prisoner until Monday morning.

Mr. Serjeant ANDREWS immediately addressed his Lordship, and requested, in that case, that the prisoner might be permitted to depart, on finding sureties for his re-appearance on Monday morning.

Mr. ALLEY, however, was proceeding to oppose this application on the part of the prosecution, when

Mr. Justice PARK said he could make no distinction between the case of the prisoner and that of any other person convicted of felony; justice must be dealt out to the same extent to the rich man as to the poor. He begged, however, that he might not, in

saying this, be supposed to cast any aspersion on the character of the prisoner, as he had no doubt, if the forms of justice had allowed his taking bail for the prisoner, that he would have appeared accordingly. It was probable that the court might pronounce a sentence of imprisonment, and consequently it would make little difference whether the judgment was pronounced then or on Monday.

The prisoner then bowed to the court, and was conducted to Newgate.

JUDGMENT.

On Monday, at 12 o'clock, the prisoner was brought into Court, and on being placed at the bar the Recorder addressed him as follows:—

“ John St. John Long, you have been convicted of the crime of manslaughter, with which you stood charged; and, after a patient hearing of the evidence, and a deliberate consideration of the case, a jury of your country have been induced to find you guilty. Every circumstance connected with your case has been duly considered by the Court, and they are induced to order the judgment which it is my duty to pass. The sentence of the Court upon you is, that you pay a fine of £250. to the King, and that you be imprisoned in his Majesty's gaol of Newgate until that fine be paid.”

The prisoner immediately paid the fine, and was discharged.

RECOVERY FROM RUPTURED UTERUS.

To the Editor of the London Medical Gazette.

Hoxton-Square, Oct. 25, 1830.

SIR,

SHOULD the following case of recovery from ruptured uterus, which occurred in my practice a few years ago, be deemed by you worthy a place in your very useful journal, I shall be obliged by your inserting it. It is in many respects similar to the one related by Mr. Macintyre, in the number of the *Gazette* for October 2d; but differs from it in one main point—viz. the state of the os uteri—which, in Mr. Macintyre's case, is described as being rigid and much contracted. I perfectly agree with my quondam friend, Mr. Harvey, in the remarks he has made on that case in the number for October 16th, and cannot, with him, reconcile the idea of the very advanced stage of the labour (as reported by the midwife) with that of the rigid and contracted state in which Mr. Macintyre afterwards found the os uteri; under circumstances, too,

of such general relaxation. It sometimes happens that a midwife, for want of sufficient tactics in discovering the os uteri, on feeling the head of the child low down in the pelvis, through the thinned parietes of the uterus, imagines that the labour will soon be completed. It is this way only that I can account for the apparent discrepancy.

CASE.—On the 20th of May 1821, between four and five o'clock, P.M. I was hastily called upon by the late Mrs. Maddock, a very respectable and intelligent midwife, who requested me to accompany her to a Mrs. Rumsey, 6, Hammond-Square, Hoxton, to a case, as she believed, of rupture of the uterus. She informed me, on our way thither, that she had been sent for two hours before, and found the patient in strong labour; that, upon examination per vaginam, she found the os uteri fully dilated, and the head of the child low down in the pelvis; that the pains increasing, the head began to press on the perineum, which led her to expect speedy delivery, when suddenly, during a strong pain, the patient gave a loud scream, and said, "Oh, what a pain! I am sick—I am sure something has burst in my belly!"—and upon making an examination, the midwife found that the head had entirely receded beyond the reach of her finger. The patient now, she said, became affected with vomiting and hiccups; and from the change which had taken place in her countenance, she thought the poor woman was dying. Before she came off for me, the patient requested that a pillow might be put under her belly, for she could not bear the weight of the child.

On my arrival, I found the patient free from pain, but her countenance was expressive of much anxiety and alarm; her respiration was much hurried, and occasionally interrupted by hiccup; her pulse was very small and irregular. Just before I saw her, she had vomited a small quantity of dark brown-coloured fluid.

On making an examination per vaginam, I could not discover any part of the child, although I passed my hand sufficiently high to ascertain that the capacity of the superior aperture of the pelvis was somewhat diminished by a projection of the sacrum. On placing my hand on the abdomen, I could distinctly feel the child through the parietes.

Convinced that Mrs. Mattock was right in her conjecture, I immediately proceeded to deliver, by bringing down the feet of the child, which was very easily accomplished, the uterus not offering the least resistance; indeed I was hardly sensible of the existence of that organ, for after my hand had passed the head of the child, which was lying loosely over the superior aperture of the pelvis, it seemed at once to enter the cavity of the abdomen.

The hæmorrhage, which before delivery was very trifling, now became very considerable, and the poor creature appeared to be sinking fast. I again introduced my hand for the purpose of bringing away the placenta, which I found detached, and lying in contact with the intestines, the convolutions of which I distinctly felt. Withdrawing the placenta with my right hand by means of the funis, and keeping the left hand in the cavity for the purpose of preventing the protrusion of the intestines, after a little time I was agreeably surprised to find it gently acted on by the uterus, when I gradually withdrew it.

Although I considered the case as hopeless, I was pleased to find, after my hand had been withdrawn, that the hæmorrhage considerably diminished; and that by frequently supplying her with small quantities of weak brandy and water, she was so much revived about an hour after delivery, as to tell me, though with a very feeble voice, that she felt better. Her respiration, too, had become more tranquil, and with less hiccup, but her pulse was very feeble and fluttering, and she made frequent efforts to vomit. I gave her as soon as possible sixty minims of Tr. Opii, and ordered thirty minims to be repeated every three hours. She was delivered about 6 o'clock p.m. and I saw her again five hours afterwards, and was told that the first dose of Tr. Opii had been retained, but that the second had been rejected, which had also been the case with small quantities of gruel, and brandy, which had been occasionally given to her. She was now evidently under the influence of the opium, but I thought the appearance of her countenance was improved. Her pulse was certainly more determined and regular.

I visited her again early the next morning, and learned that she had not

had much sleep, but that she had lain very quiet, except when occasionally disturbed by vomiting or hiccup. As some degree of re-action had now taken place in the system generally, and as she complained of much pain in the region of the uterus, especially when the left side was pressed upon, I took fourteen ounces of blood from her arm, and ordered her saline medicines to be taken through the day, and an opiate at night. On my visit the next day, though there had been occasional returns of vomiting and hiccuping, I considered her in other respects better. Her pulse had acquired considerable steadiness, and was not too frequent, and there was much less complaint of pain when the abdomen was pressed. The bowels not having been relieved since her delivery, I directed that a drachm of Magnes. Sulph. should be added to each dose of her saline medicine, and which, with the assistance of an emollient injection, soon produced the desired effect. I should have stated, that a moderate discharge of a slight sanguineous character had taken place from the vagina during the whole of the time since delivery, and which had now become rather offensive. Nothing worth remarking took place after this time; the pain of the abdomen, with the other distressing symptoms, gradually left her; so that at the end of a fortnight she was free from any complaint except debility and a slight sanguineo-purulent discharge from the vagina.

It is necessary that I should state that Mrs. Rumsey, the subject of the above case, was 36 years of age, of a very short stature, but apparently of a sound constitution; she had been the mother of several children, most of whom had been born alive, after tedious but safe labours.

There are some interesting points respecting this woman's subsequent labour, which I should have wished to have mentioned; but which, with a few remarks I had intended to have made on the operation of turning the child in utero, and on the cases requiring it, I shall reserve for a future number, having already, I fear, trespassed too much on your valuable pages*.

I am, Sir,
Your most obedient servant,
J. W. K. PARKINSON.

* We shall be glad to hear from Mr. Parkinson again.—E. G.

DR. W. PHILIP & DR. J. JOHNSON.

To the Editor of the London Medical Gazette.

SIR,

I DID not see what Dr. Johnson calls his rejoinder till last night*. That I may not appear to be guilty of a misstatement, it is necessary to point out one more of this gentleman's misconceptions. Had he read my observations on the diagnostic symptoms of tubercles, he would have seen that in the passage he quotes I do not speak of these symptoms, but merely state that although organic disease may make a certain progress in the heart without betraying itself by any deviation from the healthy state, this does not appear to be the case with respect to the lungs, some deviation from the healthy state of their function seeming always to attend from the earliest stage, although not such as enables us to distinguish tubercles from the less serious affections of this organ.

With respect to the rest of Dr. Johnson's observations, he either wholly overlooks the grave charges I bring against him, or replies by ribald jokes which have no relation to the questions between us.

I am, Sir,
Your obedient Servant,
A. P. W. PHILIP.

Oct. 29, 1830.

SMALL-POX IN INDIA.

Extract of a Letter to Dr. Gregory from J. S. Chapman, Esq. Acting Assistant-Surgeon, 11th Light Dragoons, dated Cawnpore, East Indies, May 4, 1830.

* * * *

— Small-pox has been playing the very deuce at this station. There appears to be no positive security against the disease, either by vaccination or small-pox inoculation; and I have seen several cases where the patients have caught small-pox twice, and have been each time very severely marked, and in

* This note was received too late for insertion last week.—E. G.

two instances have died of the second attack of small-pox. I would recommend that all children vaccinated in India, and sent to England for education, should, on their arrival there, be re-vaccinated, as certainly by far the greater number of our small-pox cases subsequent on vaccination have occurred in persons vaccinated in India only some twelve or fifteen years ago. I do not like the appearance of the vaccine vesicle I have seen here, and it does not pass through that course which it ought. I have taken down many interesting cases, and my observations are numerous on this head. Do you wish for any information on the subject?

* * * *

HISTORY

OF

A CASE OF STAMMERING,

*Successfully treated by the long continued use
of Cathartics.*

BY JOHN BOSTOCK, M.D. F.R.S.*

—

IMPEDIMENTS of speech are usually regarded as originating either in a physical defect of the organs which are exercised in the production of articulate sounds, or as proceeding from some cause more of a mental nature, as habit, imitation, or the like. The modes of treatment that have been proposed, as far as we are made acquainted with them, are accordingly adapted to one or other of these supposed causes, and consist either in certain methods of managing the muscles that are concerned in speech, or in counteracting those circumstances which may be supposed to induce the habit, or the tendency to imitation. A case has fallen under my observation, which has led me to take a different view of the subject: and as the treatment has been, upon the whole, successful, I presume that a short account of it will be acceptable to the society.

A boy, of a robust form and florid aspect, of a healthy constitution, and of more than ordinary activity both of mind and body, when between two and three years old, and after having ac-

quired considerable readiness in speaking, was suddenly affected with so great a degree of stammering as to be almost incapable of uttering a single syllable. Two eminent physicians were consulted: they confessed their inability to propose any specific plan of treatment which might afford a prospect of success, but in consequence of a somewhat plethoric state of the child, they advised that a strong purgative should be given. The effect of the medicine appeared so favourable, that it was repeated three or four times, and each time with such decided benefit, as to leave no doubt on this point in the minds either of the parents or the practitioners. The complaint, however, shortly recurred, was again attacked with the same remedy, and was again subdued. After this plan had been continued for some time, it was conceived that, in addition to the purgative system, the effect of which, although so salutary, was temporary, further advantage might be obtained by adopting a system of diet which should permanently reduce the plethoric habit, and obviate the necessity for the continual repetition of the purgatives. This was accordingly done, and was rigidly adhered to for several years. Animal food was totally abstained from, and even vegetables were taken in as sparing a quantity as was consistent with the support of the system. The effect of this regimen was sufficiently apparent in the altered aspect of the child, who became much less plump and florid, but still retained a due share of vigour and activity, and was fully adequate to enter into all the sports and exercises suited to his age. I had frequent opportunities of witnessing the result of this plan, and I may venture to assert, that it is impossible to have stronger evidence of the beneficial operation of any medical treatment than is presented by the case in question.

By a steady adherence to this discipline for about eight years, the complaint was kept at bay; but whenever any relaxation in the diet took place, or when the purgatives were omitted or too long delayed, symptoms of the impediment immediately appeared. At length, when about twelve years of age, the tendency seemed so far subdued, that a relaxation of the restrictions was not followed by the usual unfavourable consequences, and the boy being then at a public school, it was not so easy to

* Medico Chirurgical Transactions.

maintain the former discipline. For some time no bad effects ensued, but at length the complaint recurred, and was unusually obstinate, so as to require a long and severe course of purgatives, which, however, was finally successful.

During the last two years the tendency has occasionally manifested itself, but it has always been easily removed by a moderate use of purgatives, and by a temperate, although not a rigidly abstemious diet. The boy, who is now in his 15th year, may be said to be free from the complaint. No one but those who are aware of the circumstances of the case, and were on the watch to detect even a slight defect, would notice any thing peculiar in his mode of speaking. He even possesses a considerable rapidity and volubility of enunciation; and as a proof of this I may state, that I was lately present at a juvenile exhibition, when he bore a conspicuous part in a comic dialogue, in which he displayed a complete command over the organs of speech. In this respect he may be favourably contrasted with many of those individuals who have been under the care of the masters who profess to remove these impediments. It would be unjust not to admit that they occasionally produce very beneficial effects on those committed to their care, but I think it may be asserted, that in all these cases there is a certain peculiarity in the mode of speaking, which, although much preferable to decided stammering, indicates that the difficulty is rather evaded than obviated.

With respect to the purgatives employed in this case, it appeared to be of little importance which were used, provided the bowels were very completely evacuated. What was the most frequently employed was a full dose of calomel and jalap, succeeded by Epsom salts. Whenever the examination was made, it was found that the fæces were in a morbid state; and while the child was young, and the examination could be easily made, the necessity for continuing the medicine was judged of as much by the appearance of the fæces as by the state of the symptoms. It happened, on two or three occasions, that a degree of salivation was unintentionally excited, but it was not easy to determine whether this circumstance was productive of any advantage, as the relaxation of the bowels was temporary and proportional.

153.—VII.

How far we may be allowed to draw a general inference from a single case, I will not venture to decide; but I may be allowed to say, that a trial should be made of a plan of treatment which is productive of no inconvenience, which involves no expense, and does not interfere with education, or with the ordinary habits of life. It may be difficult to determine how far such a process should be recommended to adults: much must depend upon age, constitution, temperament, &c.; but I should suppose that few individuals would object to submit to a trial, although the hope of success may not be considerable.

As I propose this communication to be of a practical nature, I abstain from entering into any pathological observations on the nature and cause of the affection, further than to remark, that the complaint appears to consist essentially in a loss of power over certain voluntary muscles, and that as the muscles themselves do not seem to be affected, it ought probably to be referred to the class of nervous diseases, and may be regarded as analogous to chorea, differing from it principally in its seat, and in its being confined to one set of muscles; while chorea affects a much greater number of parts, and produces a proportionally greater disturbance of the constitution and functions.

MEDICAL GAZETTE.

Saturday, November 6, 1830.

“ Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso.”—CICERO.

TRIAL AND CONVICTION OF ST. JOHN LONG.

BEFORE we proceed to offer any remarks on the verdict of the jury in this case, we are anxious to render our report of the trial as complete as possible, by availing ourselves of the observation of an intelligent correspondent, who was present during the whole scene, and who, without being obliged to take notes, ex-

cept as it seemed good to him, had his eye and ear at liberty to be directed to whatever struck him as most deserving of attention in the course of the proceedings. Every one who has ever attended a trial in a court of justice, taking any interest in the events passing before him, and who has read a newspaper report of it afterwards, must have observed how far short of the whole truth, or even of the most essential parts of the truth, the notes of ordinary reporters fall, and how many circumstances of importance are omitted, owing to the habitual indifference of those accustomed hands; such omission, in the present instance, we are glad to have it in our power in a great measure to supply.

It may be observed, with regard to the general aspect of the proceedings, that during the day every thing went on favourably for the prisoner, with the exception of the *stubbornness of the facts* attested by the witnesses for the prosecution, and the steady determination of the jury in returning a verdict in accordance with those facts, and in despite of the influence of great names. Every consideration and personal respect was extended to "the gentleman at the bar"—every advantage consistent with the situation he then occupied in the eyes of the public was accorded to him; he may boast of having had the entire countenance and sympathy of the judge who tried him, the assistance of the ablest and most acute criminal lawyers, and the support of nine and twenty "honourable and right honourable" witnesses, with a crowd of good-natured admirers, who smiled upon him from time to time in anticipation of his undoubted triumph. All his witnesses were heard, some of them delivering their testimony from the bench, in consideration of their rank and titles, (though, by the way, it is hard to reconcile this with the assertion of the judge, that nobody was *known* in a court of

justice,) and not one of them cross-examined by the counsel for the prosecution. It was curious to remark, above all things, the strenuous efforts made by the learned judge, (Mr. Justice Park, who took precedence of his brother Garrow in the trying of this cause,) to show himself the prisoner's friend, glossing and construing every part of the evidence which would bear such a construction, into a kind-hearted palliation of the crime of the accused; he gave him, at least, the full benefit of every *doubt* that could be raised in the circumstances of the case, and showed him how much he appreciated the aristocratic, however feeble, influence that was brought forward in his favour. Nor should it be forgotten how much surprise and annoyance the impartial judge betrayed, when, at the conclusion of the day, the unexpected verdict reached his ear; an annoyance for which he has since taken full opportunity to console himself, by the gentle penalty which he subsequently awarded.

Mrs. Roddis, the first witness, attracted the general admiration of the whole court by the clearness and precision of her answers, her superior intelligence, and the lady-like propriety of her demeanour; her examination, too, was judiciously conducted by Mr. Phillips, who so well contrived to elicit from her every particle of evidence necessary for the prosecution, that the counsel for the defence thought it unnecessary, or perhaps not advisable, to cross-examine her. Even Justice Park himself was obliged to confess that he "never heard a better witness in his life"—a compliment, by the way, which he found it convenient not to repeat in his summing up for the jury. Taken in conjunction with Mr. Brodie's, the evidence of Mrs. Roddis formed as strong a case as perhaps was ever submitted to the minds of twelve rational men. Setting the issue even upon what the pre-

siding judge laid down as the test of manslaughter in medical practice—the difficult test, at it might seem, of establishing the fact of “the grossest ignorance, or the most criminal inattention,” the combined testimony of this lady and the eminent surgeon whom we have just named, were sufficient to flash conviction upon the mind of any impartial individual.

Observe the scene described by the lady—and the recital of which was listened to in court with the mute attention. On entering the apartment in Long’s house, into which she was shown, in company with Miss Cashin, on her first visit, “she saw what appeared to her to be two cabinet pianos; there were eight or ten ladies in the room: each lady had a pipe in her hand, about a yard and a half in length, which she put to an orifice in one of the machines, opposite which she placed a chair: she then inhaled, having the other end of the pipe in her mouth.” Such, it seems, was the drama performed day after day in Harley-Street, and such the performers.

But this was comedy compared with the circumstances which she next detailed—the conduct of Long in visiting his patient in Hampstead Road. Such desperate ignorance, and such brutality, combined in one and the same person, calling himself a medical practitioner, and producing witnesses of respectability to vouch for his kindness, and attention, and skill, are utterly inconceivable unless we admit that he adopted a different line of dealing with unprotected women from what he did when he wished to conciliate the patronage of persons of rank. The whole of the bed-room scene was disgusting and deplorable. We shall not here repeat what took place (the impression it leaves on every reader of the trial must be ineffaceable)—the exclamation of the dying

girl—“it’s horrible the state into which you have brought me: you know very well that when I became your patient I was in perfect health, but now you are killing me:” to which Long’s presumption induced him to make this, in one sense, prophetic reply: “whatever inconvenience you are now suffering, it will be of short duration, for in two or three days you will be better than you ever were in your life!” In less than two days she was dead, after suffering the most agonizing torture.

Mr. Brodie describes the state of the wound. “The extent of the inflammation was about the size of a common plate; and in the centre of the inflamed part was a spot about the size of the palm of my hand, which was dead, and in a state of slough.” And this was the wound which St. John Long directed to be exposed to the air when requested to order something to allay the pain and suffering, and which he said was in so “beautiful” a state. When Mrs. Roddis, however, proposed a poultice, he did not, it seems, object ultimately to its application—a fact which Mr. Justice Park did not forget to construe into a proof of Long’s good intentions, or at least of his not being actuated with bad ones, inasmuch as he shewed a willingness to adopt a course which seemed beneficial, and which was actually the same that Mr. Brodie afterwards prescribed. As we have mentioned this instance of the learned Judge’s good intentions to Mr. Long in summing up the evidence for the jury, we may add that he on the same occasion applied a most novel and ingenious sense to the disgustingly impudent assertion of the quack, “that he would give 100 guineas to be able to produce such wounds on the backs of some of his patients.” This Mr. Justice Park conceived to be significant of his firm reliance in the propriety of his plan, and of his having had

similar cases before in the course of his practice! Perhaps he had; but there was no Mrs. Roddis to lift the veil between them and the public.

Alice Dyke, the servant of Long, who was employed to rub the patients—and who gave Miss Cashin the fatal rubbing—swore that the *same* liquid was employed for this lady as for others, and that no greater effect was produced on her back than on that of others. Let this be contrasted with the actual effects, which, according to one of the medical witnesses, were such exactly as would be produced by holding hot irons for some time very close to the skin; or, according to another, such as gun-powder would produce; or, as Mr. Brodie deposed, such that none of the stimulating liniments in ordinary use would cause “such extensive mischief;” and either Alice Dyke has perjured—ignorantly perjured, herself—or there is a mystery in the case that goes beyond the power of philosophy to account for.

The case for the prosecution having closed, it appears that the counsel on the other side attempted to put a stop to the trial altogether on the ground that Long had as good a right to practise as any other man, no matter who—and that he had treated Miss Cashin as he did others—and with the best intentions. Mr. Justice Park would gladly have allowed this to be done, but for Mr. Baron Garrow, who seems to have been somewhat staggered with the facts of the case. We pray the reader to attend to the expressed opinions of the learned Baron—they are of great importance, and deserving of a special comment, which we cannot now stay to bestow upon them. We purpose, however, in our next number to address ourselves particularly to the subject.

At the opening of the defence, the prisoner gave in a paper to be read by the clerk of the arraigns: it was a cunningly

devised document, in which he spoke confidently of himself as a medical practitioner, and mentioned, unblushingly, that Miss Cashin was put under his care for *supposed* consumption—entirely suppressing the fact that the step originated in an insidious suggestion of his own. He had the effrontery too, to complain of the treatment he received from the press, while the truth is, that no individual, in similar circumstances, was ever treated by the press with greater lenity than he.

Then came his twenty-nine witnesses—persons worthy of record—though, be it remarked, not one-third of the number originally promised, nor including among them the celebrated individuals, like Mr. Southey, whose name was impudently employed in the puff collusive at the time of the inquest. But they were twenty-nine undoubtedly from whom we should have expected some little rational conduct—though not calculated by their authority to stamp a character for medical skill upon any one: this the jury shewed. The Marchioness of Ormonde was heard giving her evidence from the Bench *from the right hand of Justice Park*. Lord Ingestrie also gave his testimony from the Bench, and so did the Marquis of Sligo. All were freely heard, none were cross-examined, and the case closed when there were no more witnesses to be produced. Then began Mr. Justice Park with one of the most favourable specimens of merciful charging that perhaps was ever heard. Our observations on his exposition of the law we reserve for next week; we shall only at present remark one or two of the ingenious views which he took of the facts elicited in evidence. The substance of his address to the jury was summed up indeed in this pithy and pious proposition:—that “God governs in all these cases, (medical cases) and man is only his

instrument," *ergo*, &c.;—on the other hand, that Mr. Long had produced the most unexceptionable evidence—such, that whatever might be the issue, would be a great consolation to him. Twenty-nine such witnesses shewed, at least, that "the gentleman at the bar," as he was courteously styled, was not that ignorant person that might be supposed; that, in fact, here were twenty-nine witnesses whose support might excite the envy of any medical man, however eminent!

But the Jury, evidently little impressed with the authority usually attached to aristocratic influence, retired, and after due deliberation, brought in their verdict of Guilty—a very proper verdict, Mr. Justice Park, no doubt, would have said, had it been just the reverse. His Lordship seemed to be taken quite by surprise, and claimed the interval of a day before he should decide on the sentence. Well, then, what was the result of the Sunday's meditation? A shadow of a sentence; the conviction dwindled into insignificance. A fine of £250 inflicted on a man who has been making thousands (10 or 12, it is said) per annum: as well might 250 pence be imposed! It is one of the absurdities of legislation to appoint a pecuniary penalty for specific crimes, without reference to the ability of the convicted person to pay it—5s. imposed on one man is as heavy as £50 on another; this, however, is a proceeding which may be adopted before police magistrates, who cannot stay to inquire into the circumstances of each of the numerous individuals brought before them; but in this case there is no such excuse. The circumstances of Long were known, and the decision was not formed in a hurry; so that the imposition of a paltry sum of £250 is a mere cypher in the scale of punishment to him. There is one consolation to the public and to the jury, and that in spite

of the tenderness of the judge, the brand is fixed upon the man—he is a *convicted felon*, and all the countenance and favour of "right honourable and honourable supporters" will not efface it. But, although the verdict in this case has not been followed up by an adequate sentence, its tendency will still be useful. It will put the public on their guard against the machinations and delusions of such presumptuous pretenders as Long; and to him it will be a lesson of humility, if he have but the grace to enjoy a little prudence or common sense. He will be cautious how he offend—or at least be arraigned for offending, a second time, the laws of his country. Alas! how often may he have done this when there was no Mrs. Roddis to tell the tale. Another benefit that must accrue from this trial will be the better understanding in future of the laws relating to the liability of practitioners in medicine. Baron Garrow has spoken clearly upon the subject, and his opinion will be henceforth referred to, we suppose, as a decision not to be departed from—an authority almost equivalent to the law of the land. It may be owing to our ignorance, but we must confess we are often puzzled when we refer to our law books to come at decisions, to find them so much at variance, and so much to be estimated by the character of the judges by whom they are pronounced. One eminent authority gives his opinion—Lord Coke, for instance—who says it is holden to be *felony* for an unlicensed person to undertake the cure of a patient and let him die. Lord Hale then comes and disputes the point, and, upon the ground that there were phisic and salves before there were licensed phisicians and surgeons in the world, holds Coke to be quite in error. Blackstone cautiously sides with the former. And Baron Garrow goes a step further, and expresses his sentiments as we see in the report of the trial. Which is right?

We must say that we are far from being convinced by the *for* and *because* of Lord Hale;—his “God forbid!” or appeal to our innate sense of justice: we dislike these appeals exceedingly, and do not think them at all conclusive. Nor do we see any good reason for departing from Lord Coke’s opinion; the more so as it has been confirmed by a decision of an able judge of our own time, who about the very period when Baron Hullock pronounced his much-quoted charge in Van Butchell’s case, held that the contrary was the law. We refer to Mr. Justice Bayley’s charge delivered at the Lancaster assizes on the trial of Nancy Simpson, a quack, for poisoning a man by mistake: she was indicted for manslaughter, and found guilty. The substance of the learned judge’s charge was as follows:—“I take it to be quite clear, that if a person not of medical education, in a case where professional aid might be obtained, undertakes to administer medicine which may have a dangerous effect, and thereby occasions death, *such person is guilty of manslaughter*. He may have no evil intention, or may have a good one; but he has no right to hazard the consequence in a case where medical assistance may be obtained. If he does so, it is at his peril*.” How, or why, this case has been overlooked, among the usually-cited authorities, we know not; but we shall consider the subject more particularly in our next number.

COLLEGE OF SURGEONS.

MR. CHARLES BELL was elected a member of the Council of the College of Surgeons, on Tuesday last, in the room of Mr. Lucas.

* Willcock, *Laws relating to the Medical Profession*, p. cccxvii.

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

ST. THOMAS’S HOSPITAL.

CLINICAL LECTURE,

DELIVERED BY DR. ELLIOTSON,

November 1, 1830.

Ill Effects of excessive Loss of Blood—Rare Malformation of the Heart.

I AM sorry, gentlemen, that I was prevented from having the pleasure of meeting you last Monday, but having been sent for to the distance of ninety miles from town, in the middle of the preceding Saturday night, I was unable to return before Monday morning, and was then too much fatigued for business, and compelled to retire to rest. Had I met you on Monday last, I should have stated that only three patients were admitted on Thursday the 21st ult., all of whom were females; one case of continued fever, one of apoplexy, and another of rheumatism. I should also have had to state, as I had done the preceding week, that no patients had died in my wards, and consequently could not have shewn you any specimens of morbid anatomy.

On Thursday last there was admitted among the women a case of ascites and diseased liver—a case of convulsions in a woman who had lately lain in, as it would appear from hæmorrhage; it might be called a case of hæmorrhagic puerperal convulsions—another case of fever—and a case of rheumatism. Among the men was a case of inflammation of the spine, which might easily have been mistaken for rheumatism—two cases of rheumatism—and, what is singular, also a case of the ill effects of excessive loss of blood, similar, in its causes at least, to that of the woman.

With respect to the presentations during the last month, among those who had been admitted since its commencement, I may mention that among the women there has gone out the case of hysteria, the two cases of peritonitis, and the case of apparently tumor in the abdomen. Among the men, the case of rheumatism of the chest of which I spoke in the last clinical lecture, and the two cases of fever.

The cases of fever were exceedingly slight, as most of these cases are which are admitted into the hospital, and required nothing more than local bleeding of the head, the pit of the stomach, and other parts of the abdomen, tepid ablution, a moderate exhibition of aperients, and an equally moderate exhibition of mercury; though some of these cases would probably do nearly as well without it. The case of hysteria was

treated successfully by bleeding (as it was characterized by great pain of the head and loins) and mercury. I mentioned that there was a case of apparently a tumor of the abdomen. In this instance I felt a moveable hard tumor upon the right side of the umbilicus, but the woman appeared otherwise in perfect health, and by purging her an immense quantity of hard faeces were brought away. On my second visit I could discover no tumor; so that it was nothing but a collection of hardened faeces; and although there was some degree of pain afterwards complained of, yet it disappeared, or at least she thought proper to complain of it no longer, after leeches and a blister. The tumor appeared to be nothing more than the result of letting the bowels get into a costive state. This shews the necessity of carefully investigating a case before you make up your opinion, for it really might have appeared at the first to be a disease of considerable danger; but by bringing away the faeces the nature of the case was fully cleared up.

The two cases of peritonitis that were presented, were cured by bleeding, general and local, mercury, and low diet.

The two cases which I purpose to select for consideration this morning, are those of the man and the woman which appeared to have been the result of the ill effects of the loss of blood. The case of the man was the following:—

Abraham Dick, *æt.* 39, a bargeman, in consequence of violent pains of the head and epistaxis for the preceding fortnight, was cupped at the back of the neck, and between the shoulders, on the 21st ult. with great relief. The day after the cupping, during a fit of vomiting, the scarifications began to bleed afresh, and hæmorrhage ensued to such an amount, in spite of all efforts to stop it, that a very large quantity of blood was lost, and he was therefore brought to the hospital on the 26th, labouring under its effects. There can be no question about the propriety of the cupping, for he had vertigo, drowsiness, violent pain of the head, and the cupping relieved all the symptoms; so that it was the accidental circumstance of hæmorrhage after the bleeding that did the mischief. It appeared that besides this affection he had been subject to vomiting, and likewise to a little cough, but particularly to fits of vomiting, which most likely depended upon the state of the head. The vomiting, however, by the bleeding grew worse, and every thing he took was rejected from the stomach, the act of vomiting being attended with considerable pain. The countenance of the patient corresponded with the effect produced by loss of blood; he was pale, straw-coloured, and complained of great debility, unable to stand or walk; his pulse was low and feeble; he likewise

complained of great thirst, which is a common occurrence when there has been any great loss of the fluids either by sweating, purging, great flow of urine, or blood-letting. He had now no pain of the head, but on sitting up or moving about there was giddiness; this, however, passed off the moment he was laid down. He felt chilly, and sometimes almost fainted; he was also restless and anxious, and his hands were tremulous when I first saw him. On feeling his pulse while he reclined, and also after making him sit up, I found there was a considerable difference, for the moment he sat up the pulse became weak and irregular, but as soon as he again was laid down, it became fuller and regular. I repeated this experiment, and found the same effect; but on a third trial the same circumstance was not observed.

He came in after I had made my visit on the evening of the 26th of October, and he was very properly ordered laudanum and good nourishment. He took thirty minims of tincture of opium, and he was ordered two pints of beef-tea, and two of milk. The case was not one of great intensity, but was decidedly a case of the ill effects of the loss of blood. He was likewise ordered a tonic, certainly one of the best in restoring the system when it has lost an abundance of blood—iron, and in the form of the subcarbonate. This will not act quickly; so that if you want to produce an immediate effect this would not be a proper remedy. As in the present case, however, there was no immediate urgency, it was very proper to administer the iron, any immediate benefit being intended to be derived from the opium. At his admission the scarifications were bleeding, but the flow was arrested by pressure. On the 27th it was found that he still vomited; that all his food was rejected; and that he had great pain in the scrobiculus cordis at the moment of vomiting, but at no other time. The pulse was said to be 88 and full, and there was thirst. He appeared to revive at night, but at four o'clock in the morning he coughed, and the hæmorrhage was renewed to such a degree that it was necessary to call the dresser, who again stopped it by pressure. At noon, the vomiting being no better, half a grain of opium was prescribed in substance in the room of the tincture, which had been rejected from his stomach. This quantity of solid opium was ordered to be given every four hours, and from the first dose the vomiting was in some measure checked, and the opium was no longer rejected. He slept that night, and on the following day it appeared that he had vomited only four times during the twenty-four hours, and that was on coughing or taking food, which is a common circumstance when persons have been subject to severe vomiting. There was less pain when he vomited, and less tenderness also in the epigastric region; it appeared,

therefore, that there was rather morbid irritability than an inflammatory condition of the stomach. He still complained of giddiness, but his headache was now but slight; his pulse was 80, full, and rather sharp; hands still tremulous. On the 29th he had slept better, and had only vomited once, shewing the propriety of the treatment. If the vomiting had been supposed to be inflammatory, and there had been considerable and constant tenderness on pressure, leeches would have been applied, but that would have made him worse; whereas, by giving him opium, he was, so far as the vomiting was concerned, better. On the 28th, as he complained of want of sleep, I preferred a full dose to the smaller ones, and substituted for them three grains at once at bed-time, and I allowed him ζ iv. of wine in the 24 hours. A clyster was required on the 29th: I found that he had vomited but once, had slept better, felt stronger. The three grains of opium, the wine, strong beef-tea, milk, and iron, were ordered to be continued daily. On the 30th the report is that he had been rather restless, and complained of a good deal of giddiness; his bowels had been opened by a clyster, which has made him feel better; he had vomited only four times the last 24 hours, and that was when he coughed; the pulse was softer. On the 31st he had passed a very bad night through great restlessness and anxiety. He had also wandered in his conversation, and attempted to leave his bed. At two o'clock, A.M. his nose began to bleed, and continued to do so at intervals till six in the morning, though measures were used to stop it; he lost, however, not more than two or three ounces of blood. At midnight his pulse was very variable at one time, and seemed to be rather full and compressible, and at another time it was almost indistinct. The sister of the ward said that fits of palpitation of the heart came on so violently, that they caused the bed to shake, and that his breathing was performed with a great noise, like that of croop, during his sleep. I presume it was stertorous. He was given half a drachm of liquor ammoniæ subcarbonatis every three hours, and three ounces of brandy at intervals, by which he was much relieved, and towards morning he was considerably better. But on visiting him at four o'clock on Sunday afternoon his countenance was still very anxious, and he wandered in his conversation; there was rather more tremor in his hands, and the pulse was sharp and variable, sometimes being a mere thread. At nine o'clock in the evening he was lying perfectly insensible, his eyes fixed, his pupils contracted, his pulse slow and feeble, and respiration taking place at long intervals. He died at half past ten o'clock.

This was a case in which the original affection was in the head, at least that was the only affection of which, I understand, he had

complained, and for which he had been treated; and the excessive loss of blood produced drowsiness, giddiness, and, no less than the previous fullness, pain of the head. It might have been thought that the giddiness and headache did not arise from any thing but the original violence of the affection of the head, but the sharpness and feebleness of the pulse, the blanched appearance, the faintness, and the known circumstance of previous excessive loss of blood, declared its true nature. When I saw him last he was doing well; and the change for the worse and his death happened between my visits.

The other case which I shall mention occurred among the women, and the affection of the head from the loss of blood proceeded to actual convulsions, and considerable difficulty must have been experienced in ascertaining the nature of the case. This woman was 19 years of age, and had had two children. She was brought to the hospital on Thursday in a state of insensibility and convulsions, and it appeared that she had been delivered of a child seven weeks before. She was in convulsions of an irregular character, with insensibility and stertorous breathing. She was seen and prescribed for after my visit: 16 ounces of blood were taken from the back of her neck, and 15 grains of Ext. Coloc. C. was administered, together with an injection, and a cold lotion was applied to her head. No information was given respecting the history of the case: all that was said by the friends was, that she had been seized with convulsions that morning, and became insensible. The natural conclusion certainly was, that this was a case of determination of blood to the head, and the proper indication of cure was to take away blood from the head. The head, too, was hot; and had she been prescribed for by myself, I have no hesitation in saying that I think it more than likely that I should have treated her in the same way. Her pulse was full; she had lain-in seven weeks; the head was hot; she was in a state of insensibility and convulsions, and the breathing was stertorous, and had she died that day without being cupped—without having blood taken from the head—I think had I been the person I should have blamed myself. But it turned out, when more of her history was known, that the propriety of the treatment was doubtful. When I first saw her the following morning she was in a state of convulsion, with morning, stupor, and stertorous breathing. Luckily for me, the gentleman who had attended her in her confinement had come to the hospital to see her, and he informed me that she had had excessive flooding in her labour, and that it had been necessary to turn the child, and that at the time of this hæmorrhage she had had a degree of convulsions similar to those now

present. He also told me that, although seven weeks had elapsed, she had never recovered her colour, and I certainly found her of a deadly white; but notwithstanding that appearance, had I seen her the day before, I should have considered her as a person in an epileptic state, with great stupor, and a tendency to apoplexy, and ascribed the paleness to the epilepsy, in which I have often seen persons ghastly and pale. I found her pulse full, and I should have thought from first feeling it that it justified me in taking blood, at least from her head, had I not been informed by this gentleman that she had had previous flooding, and had I not noticed that besides the fulness the pulse had a peculiar sharpness; certainly it was a hæmorrhagic sharpness, but it was likewise so full as to make me hesitate for a moment, and consider whether I ought not to apply leeches to the head. However, while I was standing at the bed side considering the history of her case, and taking all the circumstances connected with it into consideration, the character of the pulse altered, it actually became a little irregular and decidedly weaker, and I very soon saw clearly that it was a case of exhaustion—convulsions from loss of blood.

The treatment to be adopted was at once indicated, namely, to give stimuli and nourishment. I administered, at first, twenty minims of liquor ammoniæ in camphor mixture, and on watching its effects I perceived that it scarcely stimulated her. I repeated it in about 20 minutes, with half a drachm of tincture of opium. I waited perhaps twenty minutes more, and during the whole of this time the pulse was regularly sinking, becoming weaker and weaker, and losing its sharpness: she became colder, and a difficulty of swallowing supervened, so that nothing could be taken into her mouth. I sent for the stomach-pump; but as the stomach, being very weak in these cases, frequently becomes so irritable as to reject nourishment, and render the subsequent administration of medicine and other stimulants fruitless, I attempted to nourish her per rectum, and a quantity of strong beef tea, with four eggs beat up in it, was thrown up the intestine; but the whole was immediately rejected; it was scarcely thrown in before it was discharged. Under these circumstances I at once employed the stomach pump, and by its means some brandy, wine, and more laudanum, were got into the stomach. I staid in the hospital some few hours, and in the course of that time a considerable quantity of brandy was got down; but she regularly sunk, none of the stimulants making any impression upon her, except in one instance, when the pulse rallied, though in a very slight degree, for a few minutes. With that exception the decline of life was steady and progressive,

the breathing became slower, and in the afternoon, about four o'clock, she expired.

I am sorry to say that neither the man nor the woman was opened; the friends came and took them both away, so that I had no opportunity of examining the state of the internal organs.

I need not say that convulsions are very common in the puerperal state, and the convulsions of this woman were exactly of the puerperal character. In the convulsions of lying-in women there are the general symptoms of epilepsy; but besides these there is frequently the stertorous breathing of apoplexy, though no apoplexy is present. The patients are either perfectly comatose, the same as apoplectic persons, or between the convulsions they revive, as if they were awaking from sleep, and completely recover their senses. It is said that the patients generally close their teeth, and withdraw the under lip, and make a hisping noise. This is described by Denman in his great work on midwifery. I do not know that in the case before us there was this noise, but she had symptoms of epilepsy so far as she was convulsed and insensible, and she had symptoms of apoplexy so far as the state of stupor was constant and lasting, and the breathing decidedly stertorous. Hence she had every mark of puerperal convulsions, except that they occurred seven weeks after her delivery, which is rather an unusual thing. But while there was no knowledge of any hæmorrhage having occurred, whether it might properly be deemed a case of puerperal convulsions or not, the state of the pulse appeared to justify the bleeding that was had recourse to by those who prescribed for her the day before.

The effects of the loss of blood are, when it has been very considerable, excessive stupor, (a well-known fact, although I cannot tell how long the observation has been made,) and you will find it stated in obstetric books, both English and French, that loss of blood from great flooding leaves intense *pain of the head* and intense *giddiness*, which is not to be removed by cupping, but by stimulants. You will find intense pain of the head particularly dwelt upon, and you will also find it mentioned that there are many nervous symptoms—debility, sinking at the pit of the stomach, frequent vomiting, and violent palpitation of the heart, so that the bed will shake. It has always been known that sudden profuse hæmorrhage frequently produces convulsions; I have known persons die from hæmorrhage where the convulsions before death have been extremely violent, and in other instances symptoms of extreme and rapid exhausion are produced, and the patient will die without them. I recollect a case of a man dying from hæmorrhage of the thigh. A

surgeon having made a deep incision near the groin, because the extremity was swelled—in a state of phlegmasia dolens—wounded the great vessels of the part; a wash-basin or two of blood was soon lost, and death took place in about two hours, with extreme restlessness and convulsions. It has also been long known that, besides this violent pain in the head, this giddiness and palpitation, stimulants and tonics are the proper medicines for this state, and that bleeding is injurious. When I was studying books on midwifery, I recollect reading that this state was not to be relieved by leeches, but by Peruvian bark. Notwithstanding this, however, it is undoubtedly true that the profession are much indebted to Dr. Marshall Hall for having brought this subject particularly before them, and having delineated very accurately the effects of great loss of blood. In a paper contained in the *Medico-Chirurgical Transactions*, vol. xiii. part 1, you will find some very valuable information on this point. When I was a pupil the facts now stated were familiar to me, and formed the subjects both of instruction and conversation; but the importance of the affection, and its frequency, were by no means dwelt upon, and on that account I think the profession much indebted to Dr. M. Hall for impressing on their mind the frequency of all these symptoms from mere loss of blood, and not from inflammation, and the liability of some of them to be mistaken for the effects of inflammation. You will find it stated by him that there is “forcible beating of the pulse, of the carotids, and of the heart, accompanied by a sense of throbbing in the head, of palpitation of the heart, and eventually, perhaps, of beating or throbbing in the scrobiculus cordis, and in the course of the aorta. This state of reaction is augmented occasionally by a turbulent dream, mental agitation, or bodily exertion. At other times it is modified by a temporary faintness or syncope. In the more exquisite cases of excessive reaction the symptoms are seen more strongly marked. The beating of the temples is accompanied by a throbbing pain in the head, and the energies and sensibilities of the brain are morbidly augmented. Sometimes there is intolerance of light, but still more frequently intolerance of noise and disturbances of any kind, requiring stillness to be strictly enjoined—the knockers to be tied, and straw to be strewed along the pavement. The sleep is agitated and disturbed by fearful dreams, and the patient is liable to awake in a state of great hurry of mind, sometimes almost approaching to delirium. In some this is slight, but occasionally severe, and even continued. More frequently there are great noises in the head, as of singing, of crackers, of a storm,

or of a cataract, and in some instances flashes of light are seen. Sometimes there is a sense of great pressure or tightness in one part or round the head, as if the skull were pressed by an iron nail, or bound by an iron hoop.” You are well aware that we see these very symptoms arising every day from fulness of the head, and they are every day cured by bleeding, purging, and starving. “The action of the heart (Dr. M. H. goes on to say) and arteries, is morbidly increased, and there occur great palpitation and visible throbbing of the carotids, and sometimes even of the abdominal aorta, augmented to a still greater degree by every hurry of mind or exertion of the body—by sudden noises, or hurried dreams and wakings. The patient is often greatly alarmed and impressed with the feeling of approaching dissolution. The pulse varies from 100 to 120 or 130, and is accompanied with a forcible jirk or bounding of the artery. The respiration is apt to be frequent and hurried, and attended with alternate panting and sighing, and in this state of exhaustion sudden dissolution has sometimes occurred.” He likewise mentions that in these cases, among the very earliest symptoms, there is “a rattle in respiration only to be heard on the most attentive listening. This crepitus gradually becomes more audible, and passes into slight rattling.” That I distinctly heard in this woman. “There is also oppression in the breathing, inducing acuteness of the nostrils, which are dilated below and drawn in above the lobes at each inspiration.”

Several cases are given by Dr. M. Hall which illustrate this description: you will find it mentioned in these that stupor and stertorous breathing are among the most intense effects—stupor, stertorous breathing, and convulsions.

Now I think it exceedingly probable that this woman was simply labouring under some of the effects of the great flooding which she experienced seven weeks before. You are not at all to be surprised at the distant effects of injurious circumstances on the body; for you will recollect what I have already mentioned, namely, the great length of time at which injury of the head will produce inflammation and organic disease. I know an instance of a gentleman now having hemiplegia of the right side of the body, after having had a coup de soleil 36 years ago on the left half of the head; and the coup de soleil rendered him perfectly insensible for a length of time. He was at that time living in a hot climate, and his life was in danger; and now the opposite side of his body has become paralytic. This is one of the longest periods of time at which I have known such an effect take place. In an opposite state of the frame, however, where there is great exhaustion, you will have also ill effects at a later period

than you might have imagined. It has been known that when persons have been nearly starved to death, although they have taken food and appeared to improve, after a certain time they have suddenly sunk. In cases of hæmorrhage the same is observed; although you stop the hæmorrhage, although the patient takes nourishment, although you perhaps transfuse blood, yet at a distant period he may rapidly sink, or on making some little effort, suddenly expire: I have been told of an instance of a lady, who had been transfused, dying at the end of a week while turning in bed. Now it is very possible that the present poor woman suffered so much from the flooding in her labour that, perhaps particularly for want of paying sufficient attention to herself, of being sufficiently careful of her strength, and of taking proper nourishment, she fell suddenly at last into the state which I have described; it is very possible, and not at all contrary to what we frequently observe. If so, we must believe that such ill effects may arise from extensive loss of blood at the expiration of seven weeks. That ill effects did remain is certain, for she had never once recovered her colour, the gentleman who attended her informed me, but remained as pale up to the end of the seven weeks as at the time of the flooding. Besides, the symptoms under which she laboured were generally those which are well known to ensue upon loss of blood, and in a minor degree they are well known to last for a considerable time, vertigo, head-ach, dulness of mind, palpitation, and all the variety of nervous feelings.

Respecting the diagnosis in this state, it must be taken from the history of the patient in a very great measure; but that with the paleness, and the assistance of the pulse, will enable you to make out the real state of things. The pulse in this case was certainly full enough to justify a trial of bleeding, the effect being of course watched as the blood flowed. It was indeed rather sharp; but this is frequently the case after too much loss of blood; and this sharpness, with great compressibility, has been peculiarly called a hæmorrhagic pulse. It would seem that the heart having so small a load of blood, and that of morbid tenuity, is able to act violently upon it, whence the sharpness; while the reduced bulk and consistence of the blood, and the debility of the arteries, prevent the pulse from having any solidity. If the flooding had been known to the gentleman who prescribed for her at her admission, I have no doubt that the sharpness of the pulse would have been at once attributed to that circumstance; but without a history of the case, it is possible for the best practitioner to be deceived. When such symptoms as this, violent palpitation, convulsions, pain in the head, or giddiness, do not afford a clue to ascertaining whether they

arise from an inflammatory state or fulness; or, on the other, from exhaustion or depletion—the sharpness of the pulse being often calculated to deceive; the surest mode is to observe whether there is an appearance of great loss of blood—to examine the general powers of the patient—get a full history of the case, and to give a close attention to the effects produced by any measures that are fixed upon: to notice whether the pulse improves or not on a little bleeding, or whether it is more improved or not by the cautious administration of stimuli. These circumstances may lead you to a just conclusion; but frequently you may not see your way clearly without a knowledge of the case; and I have no doubt that mistakes often occur when these symptoms arise from excessive venesection, without the practitioner being aware of the true nature of the case, and a cure is attempted by still farther depletion.

The treatment, however, in instances of derangement from excessive loss of blood, is to give nourishment, to give stimulants, and administer opium. It is the practice of many practitioners in excessive flooding, and in every species of hæmorrhage, when a great deal of irritability comes on, and great exhaustion, to give full doses of opium, and repeat them every few hours, according to their effect; and ammonia is exceedingly proper, and brandy, and good nourishment. How far the dose requires to be increased must depend upon your observation of the case. I believe Dr. M. Hall has published a work on the subject, in which he speaks of the treatment as well as the symptoms. I have not yet had time to read it, but I have no doubt but that it contains much more information on every part of the subject than the paper to which I have referred, and which you will find in the hospital library.

This state is very analogous to one which we sometimes observe in children, and likewise in adults who labour under delirium tremens. You will find it mentioned in practical works, that children are liable to all the signs of acute inflammation of the membranes of the brain—that is to say, of acute hydrocephalus; and yet you would be wrong if you treated the disease as hydrocephalus. You know that in hydrocephalus there is acute pain of the head, intolerance of light, squinting, vomiting; afterwards dilatation of the pupils, convulsions, complete insensibility. Now these signs will take place more or less though a child have no inflammation of the brain, and may all be frequently remedied, not by bleeding, but by giving ammonia and nourishment. You will find the subject spoken of by Dr. Gooch, in a collection of papers which he published on different subjects, but particularly those connected with the diseases of women. You are in this case to judge of its

nature, and the mode of treatment to be adopted, by observing that the pulse although quick is weak—that there is no force in it, and the surface is not flushed as in common cases of acute hydrocephalus, but the whole of the skin is loose and pale; and if there be any flushing of the face it is only transient. Under these circumstances it is right to give a few drops of liquor of ammonia from time to time, and beef tea, and to keep the child warm. Under this treatment you soon discover the true nature of the case. Moreover, if this treatment be not pursued, but the opposite plan adopted, the child most certainly will die. There is also a variety of disease of this kind to which adults are liable, in which they require a similar treatment; where they have delirium and a rapid pulse, and yet would be destroyed by bleeding; it is called *delirium tremens*. The patient talks rapidly on a variety of subjects, particularly his own affairs, and fancies that conspiracies are formed against him. Although there is not violent delirium, yet he talks rapidly and incoherently, and gets out of bed, but you may easily lead him back; his delirium is not of that terrific kind which requires several persons to hold him. He is weak, in a constant tremor, and his pulse is quick. In this state of things the eyes are not red, nor is there ever any striking pain of the head; if you bleed him you may make him worse, whereas if you give him a full dose of opium—from three to five grains of solid opium, or from 60 to 80 drops of tincture of opium, and repeat it every few hours, according to its effects, and give him good nourishment, this condition will frequently go off. It is to be remembered, that the mere circumstance of trembling is no proof that the delirium requires this mode of treatment. If the face is flushed, and the eyes be red, the pulse full or hard, and the patient young, to give opium would be destruction; and bleeding is the proper plan to pursue. You must not prescribe for the name of a disease, but for the state of the patient; and I have seen cases of *delirium tremens* which required not opium, but blood-letting. You are to judge by observing whether the pulse is weak, whether the delirium is of a violent nature, whether the tongue is moist, and generally it is covered by a creamy sort of mucus; you must judge by the strength, and age, and constitution of the patient, the presence or absence of pain of the head, and the redness or natural condition of the eyes. These circumstances will generally lead you to form a good opinion as to the practice to be adopted.

You may arrange all these cases together: the headache and convulsion of hæmorrhage, the variety of hydrocephalic symptoms connected with debility, and the weak form of *delirium tremens*. There is in *delirium tremens* a mere debility and morbid irritability of the brain, which is to be

subdued by narcotics, stimuli, and good nourishment. There is the same state in children, to an incautious observer, resembling acute hydrocephalus—an inflammatory complaint—in which you have very much the same symptoms, but which are independent of inflammation, and arise from exhaustion. There is that state, of which I am particularly speaking in this lecture, arising from loss of blood, which is to be cured (if it can be remedied) not by bleeding but by stimuli, nourishment and opium, and sometimes by transfusion.

I despaired of this female from the beginning, and I saw her but a few hours before her decease. These cases are always to be considered exceedingly dangerous, from the circumstance that however well they may be going on, there is always a chance of the person suddenly sinking. When I saw this woman she was sinking rapidly; the man, however, was going on exceedingly well on Friday, and when I passed through the ward on Saturday he appeared still advancing towards convalescence, and the fatal change took place rapidly from that time, so that I never saw him again.

Respecting transfusion: in the case of the woman, although I had no hope of doing good by this means, yet knowing the benefits that had arisen from it, I deemed it right to consider the propriety of giving her the chance of it, and I therefore requested Mr. Green to see her with me, and consult upon the propriety of pouring fresh blood into her veins. When I was at her bed-side, however, she was sinking so rapidly that it was almost out of the question to suppose that an addition of blood would be beneficial to her. Then in the next place, from the heat of the head, and the great affection of the head altogether, and the suddenness with which the stupor had come on at so great a length of time, it is exceedingly probable, that besides the great exhaustion, there was some effusion into the head, or some extreme congestion. I was not certain of this being the case, but the suddenness with which the symptoms had come on at such a long period from the flooding, rendered it possible that the disease might not be altogether one of exhaustion. Mr. Green considered that there was so little hope held out in this particular instance by transfusion, from a consideration of all the circumstances, that it was not worth while to risk the credit of the operation by the addition of one more case of failure, and I did not press it. I did not think it would have done any good, but it was right for us to consider whether it was proper or not.

Rare Malformation of the Heart.

Although I have no opportunity of shewing you any of the morbid parts of these two

cases, in consequence of the patients having been removed from the hospital, I am anxious to present to you a rare case of malformation of the heart, which occurred in the surgeons' ward. I was requested in August last to see a patient of Mr. Green's, a young girl, who had been brought to the hospital a few weeks before with difficulty of breathing and swelling of the legs. I believe it was on account of the latter affection that she was taken to the surgeons' ward. Mr. Green, under whose care she was, thought there was an affection of the heart, and requested that she might be seen by me. On examination I could not satisfy myself that there was any of those diseases of the heart which can be ordinarily known by auscultation: several exist upon which auscultation throws no light. I found her lying in bed, with difficulty of breathing, and great blueness of the face and hands. This may arise from merely a great difficulty of breathing—from any obstruction to the course of the blood. I had a woman in this hospital last year whose face was nearly black from congestion in chronic bronchitis, although there was no direct communication between the system of black and red blood. I examined the lungs of Mr. Green's patient to see if there was disease there to explain the blueness, but I found there was none. On listening to her heart I found that it beat violently, but I could not satisfy myself that she laboured under any disease, and yet there was of course a reason for the blueness: it was evident there was some disease, but what it was I could not ascertain. Judging, however, from the countenance, I was led to ask her whether she had been blue from her birth, to which she replied, "yes, always more or less." My own conclusion was that she had a malformation of the heart, and that the blood communicated between the right and the left side, without the intervention of the lungs. She died about a fortnight ago, and on inspection a very rare malformation was found—so much so, that I do not recollect ever having read of a similar case. I have examined several works since, and still I can find no account of it. It is an instance of an aperture between the pulmonary artery and the aorta. It does not appear that the ductus arteriosus is open, so that there was a communication in that way; but in the two vessels, where they lie in contact, there is a small opening, and by putting the finger either into the pulmonary artery or the aorta, it may be seen from the other vessel.

On the table there are a great variety of specimens of malformation of the heart, but no case similar to the one I now shew you. The pulmonary artery and aorta sometimes communicate after birth by the continuance of the ductus arteriosus; but in the present

case there is no duct—a mere aperture. In the specimen I now exhibit there is a communication between the pulmonary artery and the aorta, and the history of the case is not known, the parts having been found in a body in the dissecting-room. An aneurism had existed in either the aorta or pulmonary artery, most probably in the aorta, and had burst into the other vessel, so that a communication was established between the two. You will find the best information on the subject of malformation of the heart in Mr. Burns's work upon Diseases of the Heart, and Dr. Farre's Pathological Researches, of which he has published the first part, and this relates to malformations of the heart. The preparations from which Dr. Farre has made his engravings belong now to this hospital, and are those before you. To produce such symptoms as appeared in this patient, there must have been a communication between the blood of the right and left cavities of the heart, or between the great veins and the great arteries, without the intervention of the lung. The symptoms are called the blue disease, or morbus ceruleus, or, if we prefer Greek to Latin or English, cyanosis. The patient is more or less blue, especially the extreme parts, and the cheeks; he is cold, there is generally dyspnoea, and some degree of cough, and at length dropsy, and dilatation or hypertrophy of the heart. These symptoms, however, do not always occur when there is a communication between the two sides of the heart. I recollect opening a lady who died of rupture of the stomach, but who was never blue, although there was a free communication between the right and left auricles, by the existence of the foramen ovale: for in truth the blood never got mixed, and simply for this reason—that the connexion was valvular, and when each vessel was filled the two leaves were laid against each other, and the opening closed precisely in the same way as the bladder, when distended, prevents a regurgitation into the ureters. This is observed by Bichat in his work upon Life and Death, and likewise in his General Anatomy. The presence of the foramen ovale does not necessarily imply a communication between the auricles when they are distended. This open state is certainly not very uncommon, but yet not so common as some people imagine.

The mischief in malformation of the heart depends in a great measure upon another circumstance, namely, whether when there is a communication between the right side and the left of the heart, the right side, or the pulmonary artery, is smaller than it ought to be, or not. If the right side be below its natural proportion to the left, or the pulmonary artery too small, then if from

any malformation a quantity of black blood can escape, it will go at once very freely to the left side.

Among the preparations which I will demonstrate after lecture, you will see a remarkable instance of the pulmonary artery forming the descending aorta, and the aorta going no farther than to give off the innominate, and the left carotid and subclavian, all the rest of the body being supplied by the pulmonary artery.

We understand that the clinical clerk has since inspected the body of the man at his late home, and discovered no disease, but an extremely exsanguous state of the blood-vessels, especially of those of the head.

NORFOLK AND NORWICH HOSPITAL.

Cancerous Tumor of the Lips.

CHARLES HOVELTON, æt. 62, when admitted on Saturday, July 31st, 1830, stated, that about seven or eight years ago he first had a small sore upon his lower lip, which used frequently to get well and then break out again; and during the last four years it had never healed, but increased rather rapidly, particularly during the last year. The primary sore, according to his description, was situated on the left side of the middle of the lower lip, and this sore, contrary to the usual course of disease, extended chiefly to the right, across the median line of the lower lip, towards the right side; it then involved the right angle of the mouth, and afterwards the upper lip, to the same extent as the lower, leaving not more than half an inch of the upper and lower lips, at the left angle of the mouth, free from disease. The widest part of the tumor is found at the right angle of the mouth, in which situation it extends almost as far backwards as the anterior margin of the masseter muscle. On the upper lip it extends nearly as high as the septum nasi; and on the lower within three quarters of an inch of the lower margin of the jaw. Its surface is very irregular and ulcerated, discharging matter, which is very offensive to the smell. The substance of the tumor is firm and hard; there is no swelling nor induration of the surrounding glandular structures with the exception of the right submaxillary gland, which is slightly tumid; but this circumstance alone is not sufficient evidence of the nature of the tumor, as to its being malignant or not, because such an occurrence constantly results from irritation produced upon the neighbouring parts from a simple superficial ulcer of the lip, and various other causes. The man's health being good, and the tumor a source of great uneasiness to him, it was agreed in consultation that it should be removed, there

being sufficient ground to hope at least, though not to state positively, that it was not of a constitutionally malignant kind.

Two or three teeth, situated in the lower jaw, (which were all that he had) being previously extracted, Mr. Crosse performed the operation in the following manner on Thursday, August 5th.

His first incision commenced high on the cheek to the right side of the nose, and was continued just above the upper margin of the tumor as far as the sound part of the upper lip; the lower lip was cut from where it was healthy on the left side to the lowest part of the tumor at the middle of the chin; and this was met by a third incision, extending from the point where the first commenced along the anterior border of the masseter muscle, inclosing all that part of the tumor which occupied the angle of the mouth. A large open space was thus left, which it was impossible to close accurately. The two edges of the wound towards the upper angle were brought together tolerably well by means of the interrupted suture; and the wounded surfaces were less exposed, and a firmer support given to the parts by attaching them to the gums, and partly covering them with the loose mucous lining of the mouth. The edges of the wound in the situation of the lower lip were more successfully closed by two pins and the twisted suture. Two strips of plaster, about an inch broad, were applied, passing round the occiput, and slit up at their extremities where they crossed over the wounds, and then the whole was supported by a bandage. One artery at the extreme right edge of the wound was tied, because it was so situated that its orifice could not be closed by the approximation of the wounded surfaces.

On the 6th the right cheek was swollen, and the eyelids oedematous; but these symptoms soon gave way to cold lotion and cutting through one turn of the bandage which was too tight; his tongue is very much parched and dry from its constant exposure to air, but his general health is very little disturbed.

In five or six days all the sutures were removed, and considerable adhesion had taken place; the man takes nourishment freely. After this the open surfaces speedily cicatrized, and on the 27th of August they were perfectly healed, and the opening into the mouth contracted to a degree beyond what could possibly have been expected. He speaks tolerably distinctly, and is able to take his food well. As it is the nature of cicatrices to contract even after they are fully formed, this opening will most likely be still more diminished after a time, and the man may lead a very comfortable existence for many years. He, however, labours under one disadvantage, viz. the almost total loss of one part, and that a very important part,

of the process of digestion, because, as his teeth are all gone, and he is not able to retain the saliva, which is constantly running out of his mouth, mastication must be very imperfectly performed. Mr. Crosse discharged him to-day as cured, but not without some apprehension of the disease returning, either in the same situation or else where.

In a clinical lecture upon this case, Mr. Crosse remarked, that the orbicularis oris muscle being destroyed at one part, the remaining healthy portion continued to act without an antagonizing power, and thus became more and more contracted, making that part of the lip which was healthy apparently less in size than it was originally: and again, the action of a great part of the orbicularis muscle having been destroyed by the disease, the muscles of the face which are inserted into it, acted without resistance, giving an appearance of the disease having extended to a greater part of the cheek than really was the case.

He also remarked that he considered the word *cancerous* as applicable to tumors in two different significations; thus, a tumor may be of such a nature as to be quite incurable, as far as our present knowledge extends, by means of any external or internal remedies; and yet it might not affect the constitution, and if removed, might not return: this he calls *local cancer*; and he terms that *constitutional cancer* which, although the diseased parts be removed entirely, still remains in the constitution, and eventually returns in the contiguous parts, or in some other parts of the body, so as to destroy the patient.

EDINBURGH ROYAL INFIRMARY.

Congenital Enlargement of Tongue.

PETER MELDRUM, from Invernesshire, æt. 19, admitted under the care of Mr. Liston, July 18th. The tongue is of a very large size, compressible and elastic, projects three or four inches from the lips, and fills completely the cavity of the mouth. It is of a dark brown hue, in some places livid; its surface is rough, at some points granulated, at others fissured, and at many traversed by large venous trunks. At the back part of the dorsum the papillæ are much enlarged, granulated points are numerous, and there are several plexuses of dilated blood-vessels immediately beneath the investing membrane. There is occasional bleeding from an ulcerated fissure near the centre of the dorsum, and also from the lateral parts of the projecting portion; in the latter situation several cicatrices are visible. Saliva flows in a continuous stream

from the apex of the tumor. The lower jaw, which is much separated from the upper by the interposed tongue, is elongated and unusually narrow; the teeth, particularly the front ones, are placed at a distance from one another, are encrusted with tartar, and project almost horizontally from their sockets. A depression is felt at the symphysis menti, as if the two portions of the jaw were detached, and the intervening space occupied by ligamentous or cartilaginous substance.

States that the enlargement is congenital, and that the organ swells every three months to a much larger size than the present, and then gradually subsides;—that a periodical tumescence took place a short time before his admission, and that the tongue has now nearly regained its average size. The bleeding is most frequent and profuse when the swelling is greatest, and then too he suffers much pain in the part.

General health good. Articulation is very indistinct, and when attempted, the unwieldy organ of speech does not undergo much movement; but the patient is readily understood by those accustomed to hear him, and is reported to attempt occasionally the singing of Highland airs. He swallows, and even masticates, pretty freely.

Mr. Liston stated that from the periodical enlargement and diminution of the tongue, and the erectile tissue being evident in many parts of its surface, he considered the tumor to be composed partly of a structure resembling that of aneurism by anastomosis, and to be throughout extremely vascular. He therefore would not attempt removal of any of the exuberant growth by incision, and resolved to intercept its vascular supply, and then perhaps to diminish the organ to the usual size, by the employment of ligature.

On the 21st a ligature was applied to each of the lingual arteries, immediately below the apices of the cornua of the os hyoides. The dissections were deep and difficult, though not tedious. On one side an irregular branch of the external jugular vein was divided, but its hæmorrhage was easily arrested by compress, and did not impede the operation. Slight difficulty of deglutition was felt for two days afterwards. No immediate change in the tumor was perceptible, but by the 23d it was evidently diminished, and there was a distinct, though gradual, decrease for some days.

On the 27th the ligatures came away from the vessels. But the patient complained of severe pain during the night, and next day the tongue was swollen to about twice its former size. His pulse was 116, rather full, and his appetite impaired. There was also a very slight erythema round the wounds in the neck. Punctures with a lancet were made in the tongue, and by hot fomentation a considerable quantity of blood was ab-

tracted; after which the pain and swelling greatly decreased.

30th.—There is considerable swelling and redness of the integuments on the right side of the face, accompanied with little pain except on pressure. Tongue much the same as yesterday. Pulse 120, firm. Appetite improved. Passed the night restlessly.

He continued to suffer no small degree of pain in the fauces and tongue, and at the extremity of the latter there was an appearance of suppuration being about to take place; but the part became discoloured, of a glazed appearance, and sloughing was soon established. In these circumstances Mr. Liston conceived that the projecting portion might be safely removed by ligatures, these being employed to assist the process which nature had just commenced. Accordingly they were applied on the 2d of August, and the patient suffered but little. On the 4th they were tightened, and again on the 5th. At that time he complained of no pain, and felt very comfortable; the isolated extremity of the tongue was almost sphacilated.

He now began to suffer acute pain in the wrist joints and hands; leeching and fomentation were employed, but suppuration quickly occurred; the abscesses were early opened. His pulse became frequent and weak. His quantity of wine was now increased, and as much nutriment given as possible. On the 7th, the portion of the tongue anterior to the ligatures was removed in a state of complete sphacelus, and on examination had evidently been exceedingly vascular. He continued easy during the night, but on the morning of the 8th became restless, and moaned much; his pulse was 140, and almost imperceptible at the wrists; his breathing became oppressed and accelerated. He sunk rapidly, and died half an hour after the visit.

On dissection, the bones of the tarsus, and the extremities of the radius and ulna, in both arms, were found softened and deprived of periosteum, and matter was effused amongst the ligaments. The cellular tissue round the base of the tongue, and amongst the deep muscles in the upper part of the neck, was extensively gangrenous, and infiltrated with bloody sanious matter. Both lingual arteries were obliterated.

ST. BARTHOLOMEW'S HOSPITAL.

Hydrocephalus—Operation of Paracentesis.

DR. CONQUEST brought forward at St. Bartholomew's Hospital last night another case of water in the head, from which he has withdrawn, by two operations, 30 ounces of

fluid. At the first operation 12 ounces were taken away, and at the second 18. The child is apparently well, the bones having nearly closed, and the patient free from any evidence of disease, although before the operation it had fits almost incessantly, and was altogether a most deplorable object. But the most gratifying and important circumstance connected with the appearance of this infant was, that it gave him an opportunity of stating that the girl on whom he successfully operated last year continues in perfect health, not having a vestige of her former disease.

Nov. 3, 1830.

BOOKS RECEIVED FOR REVIEW.

A Treatise on the Venereal Diseases of the Eye. By William Lawrence, F.R.S.

A Short Tract on the Formation of Tumors, and the Peculiarities that are met with in the Structure of those that have become Cancerous; with their Mode of Treatment. By Sir Everard Home, Bart. V.P.R.S.

A Treatise on the Mineral Waters of Harrogate and its Vicinity. By Adam Hunter, M.D.

On the Recent Improvements in the Art of distinguishing the various Diseases of the Heart, &c. &c. By John Elliotson, M.D. Cantab. F.R.S. &c. &c.

A Dissertation on the component Parts of an Animal Body; being a Lecture introductory to the Study of Human, Comparative, and Physiological Anatomy. By Henry William Dewhurst.

A Practical Treatise on the Diseases of the Eye. By William Mackenzie, Lecturer on the Eye in the University of Glasgow, and one of the Surgeons to the Glasgow Eye Infirmary.

Elements of Surgery. By Robert Liston, Fellow of the Royal Colleges of Surgeons in London and Edinburgh, Senior Surgeon to the Royal Dispensary for the City and County of Edinburgh, Lecturer on Surgery, &c. &c. Part I.

Elements of Pathology and Practice of Physic. By James Mackintosh, M.D. &c. Vol. II.

Deadly Adulteration and Slow Poisoning, &c. &c.

NOTICES.

Dr. Granville's letter has been received. We cannot insert the paper of Mr. W. The paper on the Heart in our next.

W. WILSON, Printer, 57, Skinner-Street, London.

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SATURDAY, NOVEMBER 13, 1830.

ILLUSTRATIONS

OF

DR. CORRIGAN'S THEORY

OF THE

MOTIONS AND SOUNDS OF THE
HEART.

By W. T. HAYCRAFT, M.D. &c.

THERE have been few subjects presented to the medical public that have excited more attention, and deservedly so, than those affections of the heart which had been formerly overlooked, but which are now acknowledged to be conditional in various other thoracic diseases, and sometimes simulating some of them. Auscultic symptoms, as means of detecting those affections, have been diligently studied, yet universal suffrage would seem to prove that many of the symptoms have not, with any certainty, been established as diagnostic. This defect has occurred to me, and I have no doubt to those of my readers who have paid much attention to the subject.

To the surprise of the medical world, and to the gratification of some part of it, Dr. Corrigan has informed us that our notions of the relations of the heart's action, with the sounds and impulse discovered by auscultation, are radically wrong;—that Harvey, Haller, Senac, Hunter, Bostock, Lacinnee, and a host of great names, have been mistaken on this point. This appeared almost incredible; yet, when Dr. Corrigan simply requested us to make use of our ears and touch, and to observe for ourselves if the impulse at the chest is, as we have always believed, really

synchronous with the pulse, the experiment was so easy, and, as I think, so decisive, that an impartial consideration of his doctrines seemed imperatively called for. The recollection also of a case, which the writer attended, in which the old theory was inadequate to explain the symptoms, but which perfectly coincided with the new one, gave an additional interest to the inquiry. As the case, although not uncommon, is to the point, I shall give it in few words. A young married lady, some of whose family are subject to heart affections, was within the fourth week of pregnancy seized suddenly when in bed with the following symptoms, in the order now to be related:—violent palpitation of the heart—universal sensation of cold—violent shivering. These co-existed for about half an hour; then followed extreme headache and sense of heat, which lasted about the same time; afterwards profuse sweating, with remission of the symptoms. These accessions came on several days, with diminished violence, till they gradually disappeared. On my first visit, a paroxysm had come on with great violence; the sound and impulse could be heard and felt in every part of the room. On examining the pulse, however, I found, to my astonishment, that it was barely perceptible. Now if the systole of the ventricle is the cause of the impulse at the chest, as it is of the pulse, how could this same cause produce such an increased action of the former with a diminished one of the latter? It could not be ascribed to any organic change in the heart, for the lady was perfectly well in a week. These considerations, and the coincidence of the doctrines of M. Pigeaux with the new theory, deter-

mined me to pay more attention to the subject, and to endeavour by experiments and observations, as well as by comparing the evidence on both sides, to set the matter in a clearer light. In doing this, although some weak points may be discoverable in the doctrines of Dr. Corrigan, (what theory was ever perfected at first?) yet the main parts of it will, I think, appear to the reader completely established.

Before I enter into the subject, I will briefly examine the doctrine of Hunter, which has of late years been generally received as the cynasure of our faith. His opinion was, as the reader is aware, that the striking of the apex of the heart against the chest, producing the impulse, is occasioned by the ventricle "throwing the blood into a curved tube, viz. the aorta. That artery, at its curve, endeavours, by forming itself into a straight line, to increase its capacity; but the aorta having the fixed point against the back, and the heart in some degree loose and pendulous, the influence of its own action is thrown upon itself, and it is tilted forward against the inside of the chest."

Dr. Corrigan, I must confess, unnecessarily denies the truth of the position laid down, and which was attempted to be illustrated in the tube experiment of Dr. Bostock, viz. that a fluid rushing through a curved tube gives the tube a tendency to assume a straight form. Its truth is unquestionable if we consider that all moving bodies are disposed to describe a straight line; and, consequently, a fluid moving through a flexible tube will dispose the tube to assume a straight form. Dr. Corrigan, in performing his experiment with the stomach tube, obtained a different result (see Med. Gaz. No. 127, p. 203). This arose from the great length of the tube, the lower end of which was of sufficient weight to overcome the tendency of the arch to straighten. The effect perceived was merely a re-action of the tube at its discharging orifice. On the other hand, Dr. Hope, who enters the lists with vigour against the new theory, performs Dr. Bostock's experiment, it must be acknowledged, more correctly, and obtained the same result as he, viz. a straightening of the curve. This is all very well; but Dr. Hope, apparently from a wish of destroying altogether Dr. Corrigan's evidence in the controversy, denies that any re-action

takes place at the discharging orifice. The fact, however, of this re-action, no one can doubt who is but slightly tinctured in mechanics. The revolving machine, which moves merely from the re-action of discharging orifices, is a sufficient proof. After all, this point is not worth contending, as Dr. Hope himself rejects Hunter's explanation, and Dr. Corrigan makes no use of the experiment in support of his theory, saying, very properly, that there is "no analogy between a curved tube with an open end and the aorta." Dr. Hope then has all this time been fighting for straws, and is like the boy who contends for the foot-ball, merely for the purpose of kicking it from him.

The proper question then is, not about tubes with discharging orifices, but—will the distention of the aorta with fluid cause it to straighten itself so as to tilt the heart forward against the chest? The following experiment was instituted for the purpose of answering this question. In this, as well as in the other experiments, I was ably assisted by my relation, Mr. S. Berry, surgeon of Birmingham.

EXPERIMENT I.—In a sheep, recently killed, the aorta immediately above the cœliac artery was divided, a tube inserted, and secured. The sternum being divided in the mesial line, and the pericardium opened, the heart was exposed. The sheep was so placed that the heart hung nearly *in situ*. On applying a large syringe, filled with water, and injecting the aorta by the tube in jerks, we observed the following appearances:—

1. The arch of the aorta was plainly felt to be dilated at each injection of the fluid.
2. At the same time the apex of the heart was seen to move towards, and to the right of the sternum. This motion was perfectly coincident with each injection, and its force varied with that of the latter.
3. The propulsion of the heart was extremely feeble, so much so, that unless the carcass was so placed that the heart was unrestrained in its motion, no sensible effect was produced.

EXPERIMENT II.—We injected atmospheric air instead of water. The motion of the heart was the same, but more considerable, though never forcible.

From these experiments, which were

repeated on other animals with the same effects, we have sufficient proof that a fluid distending the aortic arch will cause it to straighten itself, and react on the heart. If we carefully examine the words of Hunter, as already quoted, we shall perceive that he considered the *distention* of the arch to be the cause of the tilting, rather than simply the current of fluid through it. The latter was the opinion rather of Dr. Bostock, which he endeavoured to illustrate by the tube experiment. Now these two experiments will satisfactorily shew that the former opinion is the more tenable, for the following reasons:—The heavier fluid in Exp. I. caused slight propulsion, while the lighter fluid, which may be considered merely as a distending cause, produced a greater effect. Had Dr. Bostock's idea been correct, the reverse would have happened.

These experiments also shew the truth of Dr. Corrigan's statement, founded on anatomical considerations, that if we "suppose the arch to straighten itself by tilting up its loose extremity, this extremity must move, not towards the left side, but away from it, and towards the right."

But I would observe that the chief induction from the experiments just recited is, that although there is a force generated by the distention of the arch of the aorta, it is much too small to account for the impulse against the chest.

I will also urge another consideration against Hunter's theory, which is, that distention taking place in a tube *naturally of a curved form* will rather cause the natural form of the tube to be more determined, than to straighten it. Thus when we distend blood-vessels with wax, we suppose the injection will bring out, as it were, the true form of the vessel. The aorta fully injected with wax is still curved. The injection might be driven with such force as to rupture the coats, but the arch would not materially straighten. It will, then, I think, plainly appear that the impulse produced on the heart by the distention of the aorta must be very limited. Dr. Corrigan properly observes that the aorta is always full; now this fulness will bring out the true form of the arch, and an additional eccentric force will not materially alter its curve.

On the whole the results of these experiments are gratifying, as although

from them it would appear that Hunter's theory cannot satisfactorily account for the phenomena, yet they prove that it contains so much truth that it may be pronounced not unworthy so great a man.

But there is a difficulty in the theory of Hunter equally great with the preceding. It supposes that the impulse against the chest is occasioned by the apex of the heart striking against the ribs, that is, that the heart alternately recedes and comes into contact with such force as to produce a noise and impulse much in the same way as a hammer strikes the anvil. Now there being no space between the apex and the ribs, nor any potential space which might be filled up by air or fluid, the pressure of the atmosphere, it is evident, would prevent the heart from receding, and consequently from striking the ribs. It has been suggested that this potential space might be effected by the liquor pericardii allowing the required motion to take place within the sac of the heart. This is highly improbable, for the following reasons: first, the quantity of the liquor pericardii in the healthy state would appear insufficient for the purpose; secondly, in cases of hydrops pericardii, where the quantity might be supposed sufficient, the sound and impulse are diminished. (See an interesting case admitted into St. George's Hospital, under Dr. Seymour, in the *Medico-Chirurgical Review*, Aug. 1829, which is the first that comes to hand.) In this case there was "sense of beating and oppression of the heart, the action of which is felt by the hand to be rapid and tumultuous, but apparently *not close beneath the ribs*, as if there was fluid interposed." But the most powerful refutation of this opinion is, that in adhesion of the pericardium the sound and sometimes the impulse are greater than natural. Perhaps enough has been said on this subject.

I shall now endeavour to examine that part of Dr. Corrigan's theory which is the most interesting to pathologists, and which, in fact, constitutes its principal feature:—it is, that the sound and impulse at the chest are caused by the diastole, and not by the systole, of the ventricle, as formerly believed. In doing this I shall first ascertain the physical conditions of them both; not that physical causes are in themselves

of much importance to the pathologist, but believing that pathology is grounded in part, at least, on physiology, and that the latter takes into consideration physical, and even mechanical causes, we shall do well not to neglect them. In this discussion especially it will be found that the physical conditions will throw much light on the subject, and will even give us data by which we may determine the points in dispute; namely, the time relations of the heart.

On the Physical Causes of the Sound and Impulse at the Chest.

I shall at once endeavour to establish the opinion of M. Pigeaux, given in a paper from the sittings of the Royal Academy of Medicine, 10th March, which is, "that the sounds heard during the [contraction of the heart(?)] result from the *frottement* against the internal parietes of the heart." The exact meaning of the expression "*frottement*" I cannot explain; it has been translated rubbing, sometimes beating, banging, *dashing*: it is in the latter sense I wish to defend it.

It may be generally asserted that in all sounds there will be found, as conditional, a sudden check or arrest of some moving body. I know of no exception to this rule. In sounds more especially arising from the motion of fluids, the same fact is observable. The river, flowing even rapidly without obstruction, flows silently. The moment an impediment arrests its motion, at that moment noise and impulse are produced. If the end of an exhausted tube, or one filled with ammoniacal gas, be carefully introduced under water, the latter without noise rushes into the tube until it is full; when the motion being suddenly checked, a noise and impulse are heard and felt. Again, the sound and impulse are sharper or more intense, if I may use the expression, the more suddenly and completely the motion is arrested. This is instanced in the pulse-glass, or the cryophorus of Dr. Wollaston. In either of these instruments, (which are partially filled with water, the air having been expelled by boiling,) if the water be suffered to flow freely from one end to the other, the moment the mass of water arrives at the lower end a peculiarly sharp noise and intense impulse are perceivable. This arises from the non interposition

of air or vapour of any considerable density between the moving water and the end of the instrument, the check thereby being rendered almost instantaneous. Wishing to ascertain if the above-recited observations were applicable to motions of the blood in the heart, we made the following experiments:—

EXPERIMENT III.—To one end of a tube, two inches in diameter and nine inches long, was fastened a bladder capable of holding six fluid ounces. The apparatus was nearly filled with water. On gently pressing the bladder, so that the fluid rose in the tube a little, and then allowing the fluid to descend into the bladder by its own gravity, when the ear was applied to the tube a sound was heard resembling, in a striking degree, that of the heart. Supposing that it might be occasioned by the vibration of the coats of the bladder, in a similar way to that of the membrane of a drum, we enclosed it in a smaller bag of linen, and subsequently in a part of an elastic stocking: still the same noise was heard, though rather duller in the latter case. On holding the apparatus firmly against a table, and applying the stethoscope to a distant part of it, the heart sound was closely imitated, and even more so we thought when the hand was interposed between the cylinder and the bladder. Observing that when the tube was applied to a table not firmly supported, a considerable impulse was propagated to the table, we wished to ascertain the amount of force produced.

EXPERIMENT IV.—The same apparatus was appended to a spring balance; the weight of the former was one pound and a half, that of the water was three pounds four ounces. On raising the water in the tube about one inch by pressure on the bladder, and allowing it to become distended by the gravity of the water, the force of the impulse as indicated by the spring was three pounds twelve ounces.

From these experiments it is evident that a fluid rushing into a cavity with a moderate force is capable, if its current be suddenly checked, of producing a sound imitating closely that of the heart, and also an impulse quite equal to that at the chest. Now we have reason to believe that the force with which the blood enters the ventricle, arising from causes hereafter to be enumerated, is

equal to, or greater, than that used in the experiment. Even that arising from the *vis a tergo* in the *venæ cavæ* and the pulmonary veins, would appear adequate; for if I recollect correctly, Hales, in his statical experiments, shews, that the *vis a tergo* in the principal veins of a large animal, is equal to a column of water thirty inches in height; but the column of water used in these experiments did not exceed ten inches. For the purpose, however, of removing every ambiguity on the subject, the following experiment was made.

EXPERIMENT V.—In a rabbit recently killed, in which the heart retained some irritability, a small syringe was inserted above the *cœliac* artery into the aorta, and secured. We injected warm water with such force as to break down the sigmoid valves, so as to allow the fluid to enter the left ventricle freely. On alternately injecting the ventricle (which did not touch the ribs) to distention, and allowing the water to flow through the wounded vertebral arteries, we applied the cylinder to the apex of the heart, and most distinctly both heard and felt the sound and impulse belonging to the heart. This experiment was varied, by injecting in the same way the ascending *vena cava*, by which, of course, the right auricle and ventricle were distended: the same results took place. We also verified the results repeatedly on another animal.

On the time of the first sound and impulse.

If the reader will consider for a moment the action which takes place in the circulation of the blood through the heart, he will see that it is sufficiently analogous to that of the fluids in these experiments. He will also perceive that both sound and impulse are not, strictly speaking, synchronous with the diastole of the ventricle. The truth is, that they are—at all events the former—coincident with the *termination* of the diastole, and it would follow as a corollary, that there being no considerable pause (if any) between the termination of the diastole and the beginning of the systole, the sound may be said, without much straining the point, to be coincident with the *beginning* of the systole. Now Dr. Hope himself does not pretend to state, in the notes of his experiments, that the impulse is *synchronous* with the

systole of the ventricle, but merely that it is coincident with it. (See note 2, p. 788, No. 142, Med. Gaz.) The note is, “While the ear rested on the stethoscope applied to the middle of the ventricle, the impulse was felt by the auscultator to *coincide with the systole*, notwithstanding that the body of the ventricle appeared to be receding at the moment the impulse took place.” If the note had been worded, that the impulse coincided with the beginning of the systole, as the latter part of it would seem to indicate, it would have been quite correct. We may place reliance, however, on the general correctness of the note, which nearly expresses the truth; but Dr. Hope, in his conclusions, manifestly strains the point when he says, “the impulse occurs after the auricular contraction, and *simultaneously* (i. e. synchronously) with the ventricular.” In this he is unsupported by his own experiments, and contradicts the evidence of those gentlemen who witnessed them.

On the Propulsion of the Heart.

This action of the heart has been confounded with the impulse at the chest. It is, however, of importance to distinguish them, as in disease of the heart it becomes a symptom distinct from the sound or impulse. It appears to arise chiefly from the muscular action of the ventricle, and not, like the former, from the motion of the fluid within the cavities. In hypertrophy, it will sometimes occasion a sort of heaving of the ribs, totally distinct from the vibration of the impulse, and more cognizable by the eye and hand than by the ear. In a healthy person, perhaps, it does not exist but as a *nus* or increased pressure against the ribs, synchronous, strictly speaking, with the diastole of the heart.

EXPERIMENT VI.—A rabbit being killed, with considerable hæmorrhage, the chest was divided in the mesial line. The pericardium being opened, the heart was exposed to view, beating rapidly and firmly. We observed—first, that the propulsion of the apex of the heart was synchronous with the diastole of the ventricles. This observation is parallel to that of Mr. Wm. Dobson, in his experiments on dogs, in which he interrupted the circulation by grasping the *venæ cavæ*. In our rabbit, the circulation was destroyed by

hæmorrhage, which was evident from the paleness of the large vessels.

A stethoscope applied to the heart indicated no sound or impulse. How could it? there being no fluid circulating in the cavities to occasion them.

The auricle, when the action of the heart became more feeble, would contract several times without any corresponding action of the ventricle; and also when the heart had ceased acting, the ventricle could be irritated into action by a pointed instrument, without any corresponding action of the auricle. This would prove that the diastole of the ventricle, and rush of blood into it, does not depend so materially on the contraction of the auricle as Dr. Corrigan supposes.

Lastly, the propulsion of the heart bore no relation whatever to the irregular actions of the auricles, but invariably attended the diastole of the ventricle. The experiment was repeated.

From these observations it may be fairly inferred that the propulsion and retrocession of the heart are chiefly caused by the muscular actions of the ventricles.

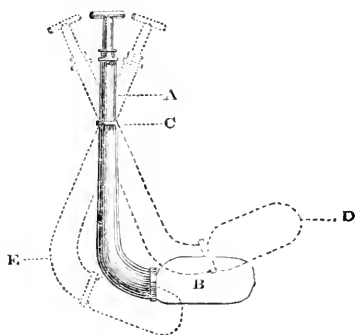
On the second or back stroke.

Dr. Corrigan's explanation of the back stroke may be received with some slight modification. It supposes, however, a collision of the internal parietes of the ventricles, which he has proved would, if it took place, produce a sound. That it does sometimes take place, in a certain degree, Dr. Corrigan has proved in his experiments on frogs, which coincide perfectly with the observations of Haller, who makes the following remarks:—"Accurate vero satis cor evacuari demonstrat et eventus, pallor in animalibus evidens quibus cor album est, ranis pullis gallinaceis, et monticulis plena superficies interna, quæ tubercula silei unique respondentia habet, et reticulatis, crassos, lacertos fossis interruptos."—*Vide Primæ Lineæ*, 103.

That this collision does invariably take place, however, I have my doubts, especially in cases of disease; and that it ever takes place *completely*, I have still stronger doubts. But it is not necessary to suppose a complete contact of the internal parietes for the purpose of accounting for the sound. Our rule laid down, that a sudden check given to the motions of a fluid will produce sound, applies as well to explain the

cause of the second sound as of the first, *e. g.* the systole of the ventricle produces a motion of the blood towards the aorta; the ventricle suddenly ceasing to contract, this motion is suddenly checked, and sound is produced. To illustrate this idea, the following experiment was performed.

EXPERIMENT VII.—The apparatus, a tube curved at the lower end, as represented, was completely filled with



water, and the syringe A applied at the top. This syringe contained about one fluid ounce and a half, the bladder B about six ounces. The piston was moved up and down, about half the length it was capable of, so as carefully to avoid impinging against the ends, and in such a manner that the termination of each action should be abrupt. We applied the stethoscope to the bladder, and both of us most distinctly heard two sounds—one coincident with the termination of the diastole, the other with that of the systole of the bladder; there was no collapse, yet the second sound was produced. In this experiment the conditions of the blood returning into, and being forced out of the heart, are very closely imitated; the sounds evidently depend not on the kind of power used, but merely on the motions and arrests of fluid in the bladder; and unless it can be proved that the laws of physics are suspended in the case of the heart, it will follow that the same effects have the same conditions in both cases. The different quantities operated on in the diastole and systole of the ventricle will explain why the sound of the latter is more acute.

EXPERIMENT VIII.—With the same apparatus as in Exper. VII. the syringe was moved up and down, without any

endeavour to check each action suddenly; the consequence was, that no noise was heard; but if the apparatus was supported at C, the whole vibrated at each action, so that during the diastole the apparatus moved to the place of the dotted lines D, and during the systole towards the dotted lines E, thus rendering it probable that the propulsion of the heart is favoured by the motion of the fluid within it.

On the Conditions of the Diastole of the Ventricle.

These I shall merely enumerate, with the remark, that if either of them be increased, *ceteris paribus*, the intensity of the sound and impulse which depend on the diastole will be also increased. First, muscular diastolic action of the ventricle; secondly, systole of the auricle; thirdly, vis a tergo from the venous system; fourthly, resiliency of the lungs, the effect of which in promoting the diastole of the cavities of the heart has been admirably illustrated by Dr. Carson, of Liverpool. See also Bertin's case of hypertrophy of the auricle, referred to in the second part of this paper; which proves the auricular systole is a main cause of the diastole of the ventricle, and its consequences.

On the Pulse and Impulse.

The want of synchronism between the impulse at the chest and the pulse at the wrist, is a main proof of the correctness of the new theory. This fact any one may ascertain on himself, by the aid of the cylinder. I have uniformly found it in the healthy person. Dr. Hope, who denies it, states that it is so in some diseases of the heart. Mr. Field, and the other coadjutors of Dr. Hope, admit that "in some cases they do not correspond with mathematical precision." The editor of the *Medico-Chirurgical Review*, who denies in toto the new theory, is obliged to acknowledge that, "in some cases of patients in an hospital, the first sound was anterior to the pulse at the wrist." Dr. Elliotson, who, it must be recollected, affirms the systole of the ventricle and impulse of the chest to be synchronous, still admits that the pulse at the wrist is not synchronous with the impulse at the chest. Dr. Ferguson also gives us most decided evidence

that "the impulse against the ribs, and long sound, are synchronous, *and that both these precede the arterial pulse.*" Indeed no one has unequivocally and absolutely denied this fact; so that we may fairly consider it as established.

It is, however, denied by Dr. Elliotson, whose authority is very weighty, that this fact is any proof of the want of synchronism of the systole of the ventricle and the impulse. His observations, which may be found in his *Lumley Lectures*, lately published, I will now state, and endeavour to reply to. He says, "when the pulse at the wrist follows the stroke of the heart (impulse at the chest), it does so after a very minute interval—such as may be explained by the distance of the radial artery from the heart. . . . Moreover, when the pulse at the wrist is observed to follow the stroke of the heart, the pulse at the innominate (so much nearer the heart) may be found to precede that of the wrist, and to occur all but simultaneously with the heart's stroke; so that the relative distance of the parts explains the whole difference, and the pulsation of the arteries in all cases arises from the stroke of the heart," (*i. e.* arises from that which causes the stroke at the chest—namely, the systole). He proceeds—"If an artery is observed still nearer the heart than the innominate, no interval between its pulse and the stroke of the heart is perceptible. In four cases of aneurism of the ascending aorta, producing a strongly pulsating tumor to the right of the sternum, *this and the heart, when the fore-fingers were placed on both, were felt, and by all seen to pulsate quite synchronously.*" This is the substance of Dr. Elliotson's evidence against the new theory, and is, I think, the strongest that has been produced. I would, therefore, beg the reader's attention to this part of the subject.

In the first place, it is not allowed that the pulse of the arteries more distant from the heart is not synchronous with that of arteries nearer the heart. I have repeatedly and carefully observed and compared the pulse at the wrist and at the temporal artery, in healthy persons, with that of the common carotid and innominate; and have (though I expected otherwise) always found them perfectly synchronous. As this fact,

on which the whole system must rest, is not so much a subject for argument as for experiment, which all may make for themselves, I shall not farther comment upon it; only observing, that I strongly suspect that Dr. Elliotson's conclusion is merely an induction from the four cases of aneurism mentioned in connexion with it, and not *entirely* founded on simply comparing the pulses of the radial artery and the innominata.

But these four cases of aneurism of the aorta, which at first view were rather puzzling, appear to me fully confirmatory of our ideas.

We freely grant that the pulsations of the tumor and the impulse at the chest were perfectly synchronous. We should expect them to be so, from the following considerations:—First, an aneurism, in order to be a sensibly pulsating tumor, we must suppose to be morbidly elastic, or contractive on its contents; which may happen either from increased elasticity or compressibility by surrounding parts. Secondly, this contractivity would be brought into action during the *diastole* of the ventricle, because the distending cause is then removed. Thirdly, towards the extreme diastole of the ventricle the systole of the auricle takes place—blood rushes into the ventricle with increased power, and (provided the power of the auricle is greater than the contractivity of the tumor) it will also distend the tumor and cause it to pulsate. This pulsation, then, will take place at the *extreme diastole* of the ventricle, consequently synchronous with the impulse at the chest; also before the systole of the ventricle, and therefore before the pulse at the wrist;—and such were exactly the facts observed. To make the matter still clearer, if possible, I will give another view of it. We may consider the contractive tumor in question as a sort of appendage or continuation of the ventricle, at least as far as it relates to a power of distending the latter arising *ab externis*; with the exception, however, of the sigmoid valves, which it is evident will present no obstacle to the same force which distends the ventricle. Taking this view of the subject, I can almost venture to predict, that, had the Doctor attentively examined, he would have felt the *quick* impulse belonging to the

pulse *at or after the termination of the visible diastole of the pulsating tumors.*

But the positive, *not inducted* evidence of Drs. Corrigan and Ferguson, is quite decisive of the coincidence of the systole of the auricle (which coincides with the extreme diastole of the ventricle) with the impulse at the chest. “They both see and hear that the long (first) sound which accompanies the auricular systole is synchronous with the impulse in the rabbit and frog.” They also observe in the frog, “that it is towards the conclusion of the auricular systole that the left ventricle touches the sides.”

Since writing the above remarks, I have read the paper of Dr. Wm. Stokes and Mr. Hart, as published in the Edinburgh Medical and Surgical Journal of October last. They come to the same conclusion as Dr. Elliotson: that approximation to synchronism of the pulse to the impulse of the chest, is inversely as the distance of the artery from the heart. The *Lancet*, which appears to see this subject through a mist, congratulates Dr. Corrigan on the corroboration this affords to his theory; not perceiving that, if true, it would form the strongest argument against it. In other respects, however, the paper on experimental proof fully confirms the views of Dr. Corrigan.

From the whole, the following conclusions may be drawn:—

1st. The cause of the impulse against the chest, is the rush of blood into the ventricle.—CORRIGAN.

2dly. The cause of both sounds at the chest is the “*frottement*,” or, more correctly, the check given to the motion of the blood in the ventricles.—PIGEAUX.

3dly. The chief cause of the propulsion of the heart against the ribs, is the muscular action of the ventricle during the diastole, whereby the axis of the heart is lengthened.—HALLER.

4thly. The first sound of the heart is coincident with the (*extreme*) diastole of the ventricle.—CORRIGAN.

5thly. The second sound is coincident with the extreme systole of the ventricle.—CORRIGAN.

6thly. The pulse intervenes between the two sounds.—CORRIGAN.

7thly. The propulsion of the heart is synchronous, in the strict sense of the word, with the diastole of the ventricle.

In the second part I shall attempt to apply the new theory, in illustrating some of the diseases of the heart.

6, Royal-Circus, Greenwich,
Oct. 21, 1830.

CASES OF A PECULIAR SPECIES OF PARALYSIS.

BY JOHN DARWALL, M.D.

Physician to the Birmingham Dispensary*.

THERE is a species of paralysis frequently attacking the superior extremities, which I do not remember to have been particularly noticed, and which, nevertheless, if I may judge from my own experience, is by no means of unfrequent occurrence. Of the actual cause of this affection, as of the proper means of treatment, I can, I fear, add little; and I shall confine myself, therefore, to a relation of cases, pointing out between each the relation they appear to bear to each other.

The first case which occurred to me was in a washerwoman, who had been accustomed to carry heavy weights upon her arms. The paralysis was confined, at first, to the muscles which raise the os humeri; there was also great emaciation of the deltoid muscle; and she could only move the limb a few inches from the trunk, and this with great difficulty. Nevertheless, she could bend the fore arm upon the arm, and, to use her own expression, she could do any thing under the elbow. The hand had also its full power. There was not the slightest symptom of affection of the head, nor, indeed, excepting this paralysis, did the patient appear to have the slightest ailment. The treatment instituted did no good, and she gradually lost the whole power of the upper extremities; after which time I lost sight of her, and have since heard nothing of the case.

About the same time another instance presented itself in a man who was in a cornfactor's warehouse, and was much accustomed to move large bags of oats, beans, &c. Like the former case, his incapacity was at first confined to the muscles which raise the arm, but gradually involved the whole limb, till, at the present time, seven or eight years from the original attack, he has no use

whatever of the superior extremities. In this instance, it was suspected that there was some disease in the origin of the nerves supplying the muscles of the arm, and a seton was inserted in the neck, but without any good effect. The muscles continued to waste, and the limb to lose its power. In neither of these cases was any pain experienced.

A short time after I had seen this last case a man applied to me for a severe pain in the left deltoid muscle. He also had been accustomed to carry very heavy weights, and latterly experienced great weakness in the limb. As in the former case, the muscle was much wasted, and was very nearly half the size of the other. Considering the pain in this instance to be rheumatic, and confined to one muscle, acupuncture was resorted to, and three needles were inserted in different parts of the deltoid muscle. The result was most satisfactory; the pain disappeared, and the muscle gradually recovered its bulk. From that time to the present, now seven years, there has been no return of the affection, though he suffers severely from a chronic inflammation of the bronchi.

Several cases of a similar nature have occurred to me since that time, but in very few has any relief whatever been afforded. In one case I am unable to come to a satisfactory conclusion as to whether or not the paralysis was real, or whether it was not a trick. If the latter, the deception was managed with consummate dexterity.

The girl was eighteen years of age. She had, according to her own account, suffered excessive pain for several hours on the Sunday evening, in the left arm and shoulder, which terminated in the total abolition of power in the limb. I saw her on the Tuesday. There was at this time no other affection than the paralysis of the arm, and she had no power either of sense or motion. As, however, she was of a plethoric habit, she was bled and purged, and every attempt was made to excite contraction in the muscles of the limb, but without success. The muscles of the arm were perfectly flabby, and she exhibited no sense of pain on pinching the limb. Moxa was now applied both over the deltoid muscle and over the cervical vertebræ; and though she complained of much pain, I could not perceive, with the greatest attention, any motion

* Midland Reporter.

in the arm or fore arm. It was now decided to insert a seton in the nape of the neck, and this remained in for nearly six weeks. A few days before it was removed, she stated that she had a little feeling in the hand, but there was no increase of power. On the Tuesday she came as usual to the dispensary, and stated that the seton had escaped by accident on the preceding evening; the limb still remained in the same state. She was told to come again on the Friday, *when another seton should be inserted.* She did so, but she had now recovered the entire motion and sensation of the arm. Her account was, that on the Wednesday evening her arm was suddenly raised by a strong convulsion of the muscles, and that from that time she had had the whole power. In this instance it may be doubted how far the fear of having another seton had influenced her recovery.

These cases occurred several years ago, and for some time none other presented themselves. Last May, however, two individuals applied for relief for affections of the same kind. The first was a recent case; the latter had existed for some time.

The first was a locksmith by trade, and had been suffering from severe pain in the right shoulder for some time. Considering the affection to be rheumatic, colchicum was ordered, and in a few days he returned, free from pain, but utterly unable to raise his arm: the deltoid muscle in this, as in all the other cases, being exceedingly flabby.

There was then in this case a manifest local want of power in the muscles of the part, and it was by no means apparent that there was any affection of the nervous system elsewhere. If, therefore, electricity can be expected to be useful in any case, it would be, I conceive, in such as this, in which there was no actual change of structure, but only a local deficiency of muscular irritability. With this view, therefore, some slight shocks were directed upon the shoulder, and with considerable benefit. At the time of being electrified he obtained more power, nor did the amendment entirely disappear, though it had somewhat diminished, at his next visit, four days after. The shocks were again repeated, and with similar results; and after the third application he stated that he fully recovered the use of the limb. I have not seen him since.

The last case is still under treatment, and is the exact counterpart of that which is first mentioned, excepting that it is confined to the left arm. The loss of power had commenced in the muscles that raise the shoulder, but had gradually been extending downwards for four months. She could still, however, do any thing under the elbow. There was slight pain on pressure in the deltoid muscle, and she experienced considerable pain in the shoulder-joint, upon an attempt being made to raise the arm. The muscles of the arm were all greatly emaciated. In this instance acupuncture was practised several times, but without any apparent relief, and at length recourse was had to electricity. This had the effect, in the first instance, of preventing the farther progress of the complaint; and latterly she states that she has acquired additional strength in the limb, though this is not very apparent to an observer. There can, however, be no doubt that the muscles have somewhat increased in bulk. This woman had also been accustomed to carry heavy weights. The circumstance particularly calling for notice in these cases is the pain preceding the loss of power, and the apparent facility with which, while in this state, the farther progress of affection was prevented. Are we also to regard the fact of several of these persons having been accustomed to carry heavy weights, as merely accidental; or is there any connexion between the exertion thus required and the after loss of power, as cause and effect? Again, in what way is the pain which stimulates rheumatism in its character, to be regarded? And in what way does electricity act?

The impression on my mind is, that this is primarily an affection of the nerves supplying the elevating muscles, and that they may have been injured by the straining necessary in raising or carrying heavy weights. I am the rather inclined to this opinion from having observed a similar wasting of muscles in a case in which the ligaments of the shoulder joint had been strained, if not broken, and in which, though actual dislocation did not take place, the os humeri hung at a distance from the scapula; the space between the acromion process and the os humeri being increased to nearly an inch. Now here it was impossible that much straining of the nerves should not take place,

and we know that, without the full influence of the nerves, the muscles cannot act. Dr. Wilson Philip's experiments also prove that secretion is under the superintendence of the nerves; and if secretion, then also nutrition must be concluded to be equally under their superintendence. Farther, supposing that a function be not exercised, diminution of power invariably succeeds, and generally wasting of the organ which is the instrument of the function. Thus, then, we should first have an affection of nerves producing pain, and impeding the use of the muscles; secondly, the muscles being dependent to a certain extent for their nourishment upon the nervous energy, wasting would ensue, and loss of power. And again, the loss of power necessitating a still farther diminution in the exercise of the organs, would increase the emaciation, till not only the function of the muscles would be annihilated, but their structure almost, if not entirely, would be wasted away. I throw out these hints with considerable diffidence, yet, as in all the cases I have seen, the affection attacked persons who were dependent on their labour for their subsistence, it is an object of no small importance to ascertain the nature of this disease, and to stop it in its first progress. How far electricity will be found serviceable in these cases generally, remains yet to be ascertained. Its action, however, is that of a stimulant, and though it probably is not the same with the energy afforded by the nerves, it has evidently the power of exciting that energy, and where the structures remain unimpaired, it might be expected to be useful.

CASE OF UNUNITED FRACTURE OF THE FEMUR,

*Cured by introducing a piece of silver wire
between the ends of the Bone.*

By DR. SOMME,

Surgeon to the Civil Hospital, Antwerp*.

A NATIVE of Madras, from 30 to 35 years of age, on board a vessel, fell from a height and fractured his thigh. He was brought to the hospital Feb. 17, 1828. The

fracture was oblique, and about the middle of the limb. The usual treatment was pursued; he was in good health, and no fears of his doing well were entertained; but he was restless, would insist on getting up, disturbing the dressings, &c., and at the end of ten weeks was as far from being united as on the first day; the lower portion riding upon the inside of the upper for about an inch. Extension by means of bandages; Larrey's plan with tow and white of egg; friction of the broken ends;—these and similar methods were tried during the next four months without avail, when the cure was at length effected by the following contrivance.

Let it be remembered, that the left femur was broken obliquely about the middle, and that the fractured extremities rode over each other, the lower inwards, and the upper end outwards.

The patient being placed on his back, and supported, I passed a long trocar and canula at first downwards on the inside of the upper fragment, and made it pierce the skin behind and a little to the outside; the trocar was then withdrawn, and a silver wire passed through the canula and out at the posterior opening. The canula was then withdrawn, and being replaced on the trocar, they were introduced again above and on the outside of the lower fragment, and made to pass out at the same opening behind. The trocar having been removed, the other end of the wire was passed through the canula, so that both ends were in contact behind, leaving a loop in front. I then made an incision in front, from one orifice to the other made by the trocar, and drawing the extremities of the wire through the wound, brought the loop between the fractured ends of the bone, and approximated the edges of the skin with sticking plaster.

In order to secure the tractability of the patient during treatment, I had a wooden box constructed, sufficiently long to contain the leg and thigh, and so narrow as to serve the purpose of splints. It was lined with pads, and open at top; a hinge corresponding to the bend of the knee allowed the leg to be slightly bent: the outside of the box had also a hinge, so that it could be dropped, and the wounds dressed without moving the limb.

The thigh was enveloped in a six-tailed bandage, the anterior wound brought together with adhesive straps,

* Medico-Chirurgical Transactions.

and the extremities of the wire enveloped in charpie bent outwards.

At each dressing I drew down the wire, so as to degress the loop more and more into the flesh. The anterior wound, which had been made for the introduction of the loop, cicatrized in about fifteen days; the posterior wound afforded but a trifling suppuration. Six weeks after the operation, which was performed on the 12th of August, 1828, the union was distinct, but the wire was not withdrawn till the 2d of October. I then divided one end of the loop near the edge of the wound, and drawing down the other, removed it completely: the loop had not, however, quite divided the parts which it encircled.

The cicatrization of the wound did not require a very long time, but in order to ensure the success of the operation, I continued the use of the apparatus for three months after the period at which it was performed. I then allowed him to get up and walk about on crutches, having applied a paste-board splint, first soaked in water, to render it capable of taking the form of the limb.

The external projection of the upper extremity of the bone is now nearly absorbed; the two ends are enveloped in a solid mass, which prevents their being felt as before the operation. The patient supports himself on the thigh without any pain, and merely complains of his knee, the motions of which are very limited.

One circumstance which would not have been expected is, that there is no apparent shortening of the fractured limb.

FISTULA IN PERINEO.

[THE following remarks, purporting to come from an Hospital Surgeon, are appended, in the Medical and Physical Journal, to the cases of *Fistula in Perineo* published in our No. for Oct. 9.]

The operation of dividing a stricture in the urethra, *situated in the usual seat of stricture*, viz. at the junction of the bulb with the membranous portion, may be performed with great quickness in the following manner:—

Introduce a middle-sized staff into the urethra till it reaches the stricture, then feeling the end of the instrument from the perineum, cut down upon it,

the incision made through the integuments being one inch and a half in length, and parallel and close to the raphe, the incision into the urethra being half an inch in length. Withdraw the staff, after having exactly seen and felt where it points when held in the usual position towards the bladder; then thrust the scalpel forward in the line of the contracted and indurated urethra, one-half or three-fourths of an inch. Next introduce along the urethra a middling-sized catheter, and try if it will pass into the bladder: it probably will; but if it still be obstructed, withdraw it a little, and lengthen the incision that has been already made, if the part beyond be firm and cartilaginous; or from the point where the previous incision began, thrust the knife half an inch forwards, with the edge directed upwards, instead of transversely, as before: the catheter will afterwards certainly find a ready passage onward to the bladder.

The urethra *beyond the stricture* is sure of being opened by incisions made in this manner, provided the operator possess a correct anatomical knowledge of the parts, as that portion of the canal is always capacious in such cases, having been dilated by the long continued pressure of the urine. Those who fail in performing this operation, fail from want of boldness, losing time in endeavouring to find a channel through the stricture by means of a probe or small catheter after the urethra is cut into, which may serve as a guide in the division of the stricture. Such a guide is not needed by one who relies upon sufficient anatomical knowledge, nor should be thought of by the operator, if, as is likely, he has already found the urethra impervious to the smallest instruments.

The operation is concluded by fixing the silver catheter in the bladder. The silver catheter had better be removed in forty-eight hours, and an elastic one substituted, which is to be changed for another every day subsequently, till the wound has cicatrized; at which time a urethra is left, which has indeed some tendency to contract, but which requires only, for the prevention of this consequence, an occasional introduction of a bougie.

The operation which has been described is applicable, 1st, to stricture complicated with rupture of the urethra; 2d, to certain cases of stricture

complicated with fistula perinæi; 3d, to certain cases of simple permanent stricture.

I. Rupture of the urethra, in the ordinary situation in which that lesion occurs, is characterized by sudden and considerable swelling of the penis, scrotum, and perineum, followed quickly by discolouration and partial sloughing of the integuments. Not but that these symptoms occur from other causes. 1. In dropsical persons there may be anasarcaous swelling of the private parts, attended with difficulty of passing urine, and even inflammation and sloughing from distention; 2. an abscess forming near the rectum, and opening into it, and receiving an admixture of fecal matter, I have seen attended by sudden oedematous swelling of the perineum, scrotum, and penis, followed by extensive sloughing of the integuments and cellular membrane, presenting all the external characters of ruptured urethra. 3. I have seen, in consequences of violence done to the testes, sudden and enormous discoloured swelling of the scrotum, perineum, and penis, from the rupture of a vessel, a pint of blood coming away, half clotted, half fluid, on an incision being made. 4. Appearances similar in kind were present in a patient under my care, on whose hip part of a wall had fallen, fracturing the pelvis in several places, at one of which the external iliac vein had been torn, the blood flowing from whence had made its way into the pelvis, perineum, scrotum, and penis.

In a genuine extravasation of urine, from rupture or giving way of the urethra behind a stricture situated near the ligament of Camper, the operation which has been described is peculiarly applicable. Other and additional incisions into the parts swollen with urine are indeed requisite in such a case, in order to give vent to the urine which is diffused through the different parts, and so to lessen the quantity of mortification which must follow; but especially an incision down to the urethra, and through the stricture is necessary, in order to allow a catheter to be passed into the bladder, and thus to prevent any further infiltration or flow of urine into the cellular membrane, leaving no further demand on the frame than the effort of cleansing the infiltrated scrotum and penis.

II. The same operation is of the utmost service in certain cases of fistula perinæi resulting from stricture.

Cases of stricture complicated with fistula perinæi are of two kinds: the first are those in which the constitution is good, and the stricture in the way of yielding to ordinary means: in such cases let the stricture be enlarged, and when a middling-sized catheter can be passed, let it remain in the urethra, (being changed, of course, frequently, and for a larger one:) not only will the stricture be cured by this means, but the fistula, no longer irritated by the flow of urine through it, will readily close. The second case is that in which the constitution threatens to give way, under the complicated irritation of stricture and fistula with no passage for an instrument through the stricture, or at best a passage through a cartilaginous stricture for a minute catheter only, which would neither serve to dilate the urethra, in such a case, nor prevent the continual flow of the urine through the fistulæ, or the occurrence of fresh infiltrations of urine into the adjacent cellular membrane. To this second case the operation described is perfectly applicable: perform it, and the further flow of the urine through the fistula, or into the cellular membrane, is prevented; the bladder is relieved of the strain of urging the water through narrow and obstructed channels, and the constitution is disembarassed of all that deranged it.

III. The operation described above is perhaps again applicable to some cases of very narrow stricture of the urethra, unattended with fistula. 1. If such a case were complicated with calculus, and there were reason to suppose that a calculus had made its way into the urethra, and lay behind the stricture, the operation would be strictly applicable. 2. Suppose a case, in which the stricture habitually allowed the water to flow only drop by drop, and that complete retention of urine, not yielding to common remedies, had supervened; it would certainly be a question whether, in such a case, the operation described above should be performed, or the bladder punctured, and slower means of curing the stricture resorted to. 3. Suppose a severe case of stricture, the urine for several weeks having flowed by drops, attended with conti-

nual danger of complete retention, or of rupture or ulceration of the urethra, the same question recurs.

In the two last instances, however, the expediency of the operation above described is extremely doubtful. With proper care, either the retention of urine may probably be relieved, or the danger of rupture of the urethra prevented; and by means of armed bougies, or of dilatation, begun by the use of fine cat-gut bougies, or by the use of catheters perforated at the end, and allowing a lancetted stilette to be thrust forward, (a method revived by Mr. Stafford, which is occasionally advantageous), the stricture may probably in every instance admit of being cured.

LATE INQUEST AT ST. GEORGE'S.

To the Editor of the London Medical Gazette.

SIR,

AN inquest was lately held on the body of an Irishman, who died in St. George's Hospital, the proceedings at which should not, I think, be committed to oblivion without comment. I do not profess to give a very minute and accurate detail of the symptoms and treatment of the case, for I had not watched it. My object is rather to call attention to the inquest and verdict of the jury. I have, however, collected some particulars, which I shall in the first place state. John Clancy, ætat. 48, was admitted, on the 18th of August, with a large contused sloughing wound of the left leg, originally produced nine days previously, from its being jammed between two pieces of timber. He was put under the treatment, at first, of the parish surgeon of Lambeth, but on mortification appearing his friends brought him to the Hospital. The sloughing was arrested soon after his admission, and for a short time he went on promisingly. He then became the victim of erysipelas, which first attacked the wound, and subsequently most other parts of the body, leaving depositions about the joints, and on the sheaths of the tendons, &c. The erysipelas itself was at last quite gotten rid of, but not so its effects. Great debility, and symptoms of universal disturbance of the

principal vital functions, made their appearance; hot skin, quick pulse, cough, hurried respiration, and deranged state of the mental faculties; in short, most of the symptoms characteristic of the approach of death in typhus. The patient died on the 27th of October, and the hospital was soon besieged by the friends and acquaintances of the deceased, who threatened the medical officers with direful consequences if the body was not delivered to them unopened. An inquest was held at the Turf Tap, behind St. George's hospital, on the 28th; and after the jury had viewed the body, the house-surgeon was examined. He very conscientiously declared, that without a post-mortem examination he could not give a positive opinion as to the cause of death. The jury, which was not selected from the most enlightened order of society, took into their sapient heads that the house surgeon was only desirous of examining the body for his own gratification; and being resolved to disappoint him, they prevailed on Mr. Higgs, the coroner, to issue his order for the delivery of the body to the relations, at the same time stating their wish to adjourn to the next evening, for the purpose of obtaining the evidence of Mr. Keate, under whose care the patient had been admitted; and also that of the surgeon who had previously attended him. The evidence of those gentlemen, the jury chose to conclude, would enable them to return a satisfactory verdict without any post-mortem inspection. On the 29th both Mr. Keate and the parish surgeon were in attendance, but nothing decisive was elicited. Mr. Keate said it was one of those obscure cases that without an examination it was impossible to give a positive opinion as to the immediate cause of death. The jury were, however, now determined to agree to a verdict of some kind, and complained most bitterly of having been obliged to devote two evenings to its consideration. The following is a copy of the verdict; its *clearness and propriety will doubtless be an example for the imitation of all future juries similarly circumstanced*. "That John Clancy, on the 11th of August, in the parish of Lambeth, accidentally received a contusion of the left leg, and that mortification afterwards came on in the same parish, which was stopped in St. George's Hospital, where

he languished from the 18th of August until the 27th of October, when he died, having suffered from erysipelas and inflammation, which brought on general debility: but as to the immediate cause of death there is no evidence to the said jurors, the body not having been opened, and the surgeons in consequence thereof declaring that they could not give an opinion of the cause of his death." The jury were much disposed to impress on the house-surgeon that he was not authorised to examine the bodies of those who died, even though directed to do so by the surgeons of the hospital, and that whenever he did so without authority from the Coroner, he was rendering himself liable to imprisonment for the misdemeanour. I cannot but think that in this case there is much cause for reprehension. In consequence of having obtained the body unopened, by order of the Coroner, the Irish will consider that in future they have the law on their side whatever threats and violence they resort to for the purpose of obtaining the bodies of their friends unexamined, and certain I am that juries will be obliged to give up much more of their time at inquests, if bodies be never examined previous to their viewing them.

I am, Sir,
Your obedient servant,
J. WRENTMORE.

Motcomb-Street, Belgrave-Square,
November 3.

THE LATE DR. GOOCH, HIS BIO-
GRAPHERS, AND A. M.

To the Editor of the London Medical Gazette.

SIR,

Is the individual who, in your Gazette of Saturday, the 30th of October, indited what he is pleased to call an *answer* to my allegations against the late Dr. Gooch and his biographers, ashamed of his name, that he replies anonymously to charges bearing the signature of the accuser. Perhaps A. M. is an *Artium Magister*; but his arts, alas! lack cunning, and his logic is without art. Never was more contemptible sophistry palmed upon your readers than what this said A. M. has attempted to force upon us in the room of sound argument.

Alike all sophistry, however, it will be easily demolished.

A. M., whose identity, by the bye, methinks I can recognize, from an expression which has unwittingly escaped him, and which can only refer to a recent private correspondence of mine, pretends to be a friend of the late Dr. Gooch, and one who "takes an interest in his fair fame." But to repeat with obstinacy the groundless assertions of that physician, without one tittle of additional evidence in support of them; to confound dates and garble facts; to blink the question, in fine, and assume an air of triumph, peculiar to the compilers of the Quarterly, are tolerably awkward ways and means of protecting the doctor's "fair fame," and of expressing friendship for the departed.

In the first place, A. M. asserts that the whole of my argument is "founded upon the fallacy of considering a decision of the House of Commons an infallible proof of the settlement of a disputed question."

This is not true: my argument was professedly and avowedly based on quite another ground, namely, my printed evidence and my writings on an important medico-political question, and the definitive settlement of that question, by the king's ministers, following close upon my letter, written to one of those ministers on the 28th of May, 1825; between which date and the 27th of June, that is to say, in the short space of four weeks, the doctrine strenuously upheld by myself, for a number of years, was finally adopted as true in all its bearings, and made the basis of a law of the realm.

In the second place, A. M. asserts that I do not "chuse to remember a letter, dated April 1825," written by Dr. Gooch to Mr. Peel on the subject of contagion.

This, also, is not true: it is Dr. Gooch himself who did not chuse to remember his own letter, when he assumed to himself the sole merit of *having satisfied the minds of his Majesty's ministers, and of having ensured the due enforcement of the quarantine laws*, by writing a certain article, and publishing it in the Quarterly Review, "as the best pulpit from which to address the government and the people of England." In assigning the causes which produced such wonderful effects, the letter mentioned

by his biographers is not not even hinted at by the doctor; and assuredly Dr. Gooch must have understood his own case better than A. M. The fact is, that A. M. finding the "fair fame" of the man "who loved to do good quietly, and despised noisy conspicuity," damaged in regard to this particular question, respecting which the doctor boasted not a little* of success, (now proved never to have belonged to him, since the celebrated article came six months after success had been obtained by another individual,) is pleased to fall back upon a private letter, and insists upon that document being considered as the pivot on which Dr. Gooch's merit in the question is now to revolve, notwithstanding the Doctor's absolute silence on the subject. It was my business to grapple with Dr. Gooch's assertions, as he advanced them; and not as A. M. chooses to put them; how I have disposed of those assertions my former letter has abundantly shewn.

However, let us, for a while, indulge A. M. with the adoption of his argument, that Dr. Gooch's letter to Mr. Peel, and not his article in the Quarterly, forms the real ground of the claims set up by the biographers of that physician; and let us see how it will work. The letter, we are told, which Mr. Peel received from his confidential physician, and by which he must have been mainly influenced, was dated April 1825, and was to stay mischief." So says A. M.—Now how stands the fact of the influence of that letter? So far from having had any, it was at the end of the very month of April, and up to the end of the succeeding May, that the quarantine-modifying bill was made to *progress* through the House of Commons; that an imprudent minister, a colleague of Mr. Peel, boasted of having broken the quarantine laws at Liverpool; that a few wrong-headed anti-contagionist M.P.'s in the House chuckled at the prospect of seeing the laws of quarantine abolished, because the Treasury bench had till then been silent; and, finally, that foreign nations declared their intention of putting all English vessels in quarantine on their arrival. After such a declaration, fully predicted in my evidence some years before (mark that,

reader), and after my letter of the 28th of May, which that declaration especially called forth, Mr. Grant, the Vice-president of the Board of Trade, came down to the House (4th June) to allay the general panic, by stating what the real intentions of the government were, which intentions the late Mr. Canning so emphatically developed on a subsequent day, when at last the *modifying* bill was totally altered. So much for the influence of Dr. Gooch's letter.

But supposing even that that influence had been real, in which way could it have manifested itself? Undoubtedly in the persuasion of Mr. Peel, to whom the letter was addressed, as to the necessity of leaving the quarantine laws intact. Mr. Peel would then have influenced his colleagues, and they in their turn the House of Commons, whose decision would have been such as I claim to have been produced by the repeated efforts of the contagionists, in which I bore a conspicuous part; but which decision A.M. insists on attributing to his friend's letter. Here, then, is the contemptible sophistry of this advocate of Dr. Gooch:—"Dr. Grauville's argument," says he, "is founded upon the fallacy of considering a *decision of the House of Commons an infallible proof of the settlement of a disputed question.*" But Dr. Gooch's argument, or rather A. M.'s argument in behalf of Dr. Gooch, is founded on the supposition that that physician had, through Mr. Peel, influenced the *House of Commons to settle a disputed question by their decision*; ergo, his argument is not fallacious! Is it thus that logic is taught at Oxford and Cambridge? Truly, I have known striplings come in contact with the pedagogue's birch who had reasoned far better.

After this *exposé* I need scarcely point out to your readers the blunder committed by A. M. in confounding two of my works—the letter to Mr. Robinson (now Viscount Goderich), an octavo volume, published in 1819, which was *not circulated by myself*, but sold like all other medical works; and the letter to Mr. Huskisson, a small pamphlet, written in May 1825, which was circulated extensively at my own expense in the course of two days, because the circumstances under which it was written were of the most pressing nature. Neither is it necessary for me to

* See Dr. Gooch's introductory remarks to his article on Contagion, quoted in my former letter.

remark that A. M. unhesitatingly repeats the erroneous statement made by Dr. Gooch, that another committee was appointed in 1824 and 1825 to investigate the question of contagion; although I formally and distinctly contradicted such a statement, by proving that no such committee was ever appointed.

The committee sitting in 1824, to which it has pleased both the late Dr. Gooch and A. M. to ascribe the duty of considering the questions of plague and contagion, had been named specifically to deliberate on the foreign trade of the country generally; and so far from discussing afresh these two questions, that committee began their labours by the spontaneous declaration, that they adopted at once the opinion of the only plague committee that ever sat, namely, that of 1819, which proclaimed the doctrine of contagion to be *a sound and proven doctrine*, and terminated those labours by reporting to the house and the public, long before Dr. Gooch's letter to Mr. Peel or his article in the Quarterly, but long after Dr. Granville's evidence and publications on the subject, "that they saw no reason to question the validity of the principles on which quarantine regulations appear to have been adopted*."

All these facts A. M. chooses to overlook, thus imposing on me the trouble of repeating them, and on your readers of perusing them a second time. But in return for his omission of facts, A. M. treats us with the commission of a few more blunders in the garb of sundry dark and mysterious insinuations at the end of his letter, which pass my comprehension, and therefore require no particular notice; for if A. M.'s broad assertions are incorrect, as I have demonstrated, it cannot be uncharitable to suppose that his inuendos are not much better.

In conclusion let me recommend A. M. when next he undertakes the office of advocate, to select a sounder cause, and above all to become more versed in the laws of diction.

To the Editor of the Medical Gazette I would beg leave to add, that I shall not take any further notice of anony-

mous communications on this subject which may appear hereafter in his journal, and that I am

His very humble servant,
A. B. GRANVILLE, M.D.

Grafton-Street, Berkely-Square,
3d November, 1830.

MR. SWAN'S WORK ON THE NERVES.

To the Editor of the London Medical Gazette.

6, Tavistock-Square, Nov. 5th, 1830.

SIR,

As I neither wish to appear before the public in borrowed plumes, nor to be despoiled of my own, I have drawn up the following statement, and request of you, in justice to all parties, to insert it in the Medical Gazette.

I remain, Sir,
Your most obedient servant,
J. SWAN.

To the Chairman of the Board of Curators, Royal College of Surgeons, Lincoln's Inn Fields.

SIR,

A report being in circulation that my work on the Nerves is published at the expense of the College, and that I am also acting under their authority as far as regards its publication, I cannot let such unfounded rumours continue without the fullest contradiction, and therefore beg leave to ask you, as Chairman of the Board of Curators, whether I have received the slightest pecuniary or literary assistance from the College, either collectively or individually?

I need not, sir, have troubled you on this occasion, but as the report emanated from the theatre of the College, it requires the most direct and public refutation.

When I received the last Collegial prize, it was stated that, as I had on the former occasion been presented with the honorary gold medal, and the College had nothing further to give, it was their proposal, for the purpose of marking more especially their approbation of my labours, to have the drawings accompanying the Dissertations engraved, and the engravings eventually

* See the printed Report of the Committee on Foreign Trade, and the evidence of Dr. Granville in the Journals of the House of Commons, and in most of the medical journals of the time.

presented to me; this proposition was, however, abandoned after much correspondence on the subject.

I have the honour to be, sir,
Your most obedient, humble servant,
J. SWAN.

Royal College of Surgeons in London,
November 3, 1830.

SIR,

The Chairman having this day laid before the Board of Curators of the Museum of this College your letter of the 30th ultimo, addressed to him, desiring to be informed whether your work on the Nerves is published at the expense of this College,—

I am desired by the Board to state in reply thereto, that you have not received the slightest pecuniary or literary assistance from this College, and that the proposal respecting the engravings for such work was declined by you, and was not abandoned in consequence of any alteration in the opinion of the Board or of the Council as to the eminent utility and merit of the work.

I am, Sir,

Your most obedient humble servant,
EDM. BELFOUR, Sec.

To Joseph Swan, Esq.

THE CIRCUMSTANCES OF THE LATE MR. HUSKISSON'S FATAL ACCIDENT.

*To the Editors of the North of England
Medical and Surgical Journal.*

GENTLEMEN,

THE Right Honourable Mr. Huskisson's melancholy case having excited, in a considerable degree, the public sympathies, I am induced to avail myself of your respectable Journal, to state the particulars, as far as my observations extended. Accompanied by Messrs. Wharton, Garside, and White, I was introduced to Mr. Huskisson, at the vicarage, in Eccles; he was lying on a couch; his countenance was pallid; his expression was firm and collected, though he suffered from frequent spasmodic pains; his pulse thready and extremely feeble; his extremities cold, indicating the powerful shock his constitution had received, and which had not been succeeded by any re-action.

On inspecting the limb, the tibia and fibula were comminuted, and the integuments much bruised and torn; the os femoris was broken into a great number of small, angular, and rugged fragments; the rectus and triceps muscles were quite denuded and crushed, and the sartorius torn across. The sheath of the femoral artery was laid bare, and the superficial nerves were exposed and torn. The accident had occurred about two hours before we arrived. Lord Wilton had, with great judgment, applied a handkerchief and stick as a field tourniquet, which had restrained the hæmorrhage. The quantity of blood which had escaped would not have been considered great, had it occurred in a strong and vigorous man; but in an individual sixty years of age, and previously enfeebled by disease and a recent operation, it was sufficient, in conjunction with the severe shock occasioned by the accident, fatally to depress the vital powers.

Notwithstanding the premonition which these alarming symptoms afforded, every thing was prepared for amputation, but we discovered that the exhausted state of our patient rendered such a step highly improper. With the hope, therefore, of producing a favourable impression on the nervous system, and thus rousing the vital powers, in order to enable him to bear the operation, cordials, viz. brandy, ammonia, and laudanum, were liberally administered—flannels, moist and hot, and sprinkled with laudanum, were applied to the limb, and bottles of hot water to the feet, and to the sides of the body. The femoral artery was secured, in order to prevent further hæmorrhage. I lament to state, however, that these remedies were ineffectual, and that the fatal depression of the vital functions sensibly increased. After a short period, he complained of an extremely oppressive sensation at the præcordia; the pulse became imperceptible at the wrist; he suffered from a general sense of coldness; this was succeeded by rapid and laborious respiration, and, in nine hours from the period when the accident happened, he quietly breathed his last. During this period, no moment occurred that afforded a favourable opportunity for the operation, though our most anxious attention was directed to every symptom which could indicate it. Our patient gradually, but uniformly, declined, and the succession of his symp-

toms was such only as rapidly conducted him to the deplored catastrophe.

I am, Gentlemen,
Yours respectfully,
J. A. RANSOME.

St. Peter's-Place,
Manchester, 10th Month, 1830.

MEDICAL GAZETTE.

Saturday, November 13, 1830.

"*Ilcet omnibus, ilcet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso.*"—CICERO.

STATE OF THE LAW RELATING TO CRIMINAL MALPRACTICE IN MEDICINE.

It was a suggestion of Mr. Baron Garrow, at the late trial of Long for manslaughter, that the law of the case should be submitted to the collective wisdom of the bench. Perhaps the sooner this were done, the better. Few questions are more deserving of a solemn discussion than this:—whether the fact of a person accused of *malapraxis* not having received an education in any manner qualifying him for undertaking the cure in which he has failed, should be sufficient reason for imposing on him a heavier penalty. The impression on the learned Baron's mind—his "reading of the law," as he termed it—was, that the most uneducated and ignorant man in society—the humblest bone-setter—stood, and *ought* to stand in the dock, if charged with criminal malpractice, on the same footing, and with as strong a presumption in his favour, as the president of either of the medical colleges: in short, that the question did not turn in any respect upon the comparative fitness or unfitness of the person undertaking the cure, or his motives for undertaking it, but altogether upon the

degree of attention or inattention he has manifested towards his patient: in a word, his *apparent* inclination to succeed in the line of business he has adopted. This, it must be perceived, is glorious news, and most excellent encouragement for all who are disposed to drive the profitable trade of quackery: it announces to them, and to all whom it may concern, this important fact—that in the eye of the law even the best medical education is as nothing where the consequences of medical treatment are at issue; and that any individual, however ignorant, however impudent, however mercenary, may boldly stand forth to the world as a medical practitioner, provided he only add to his stock of assurance and his other attractive qualities—the semblance of good nature and good intentions.

Was it not upon this ground that Long was permitted to go at large after incurring a nominal penalty, (some penalty there should necessarily be, for the carelessness and rudeness of the man, in *Mies Cashin's* case, could not be denied or palliated), while his gross ignorance was held at nought as a thing totally irrelevant in estimating the verdict? Yet the Baron's colleague, Mr. Justice Park, did not, it seems, read the law exactly in the same way; for though evidently well enough disposed to an indulgent construction of the case, he seemed rather inclined to adopt Lord Ellenborough's test*, and to lay some little stress upon that part of the evidence which proved the consummate ignorance of the prisoner. It is difficult to be sanguine about the solemn convocation of the twelve, when we find two judges sitting on the same bench thus materially differing from each other in opinion.

* "To substantiate the charge of manslaughter," says Lord Ellenborough (*Williamson's case*, *Old Bailey*, 1807) "the prisoner must have been guilty of criminal misconduct, arising from the grossest ignorance or the most criminal inattention."

If the law be indeed as stated by Baron Garrow, the reign of quackery is established. But for the sake of humanity, for the sake of common sense, let it not be believed that the law of the land is in this imperfect, this absurd condition—that England, so famed for the wisdom of her legislative ordinances, should stand alone amid the nations of Europe with so fatal an omission in her statute-book. Is it to be credited that no efficient provision has ever been made by our legislators for the protection of the lives of the community by laying restraint upon ignorant and unlicensed empiricism? That, while every one admits the policy of shielding things external—of saving goods and property from the risk of dangerous mismanagement, nobody has had compassion on the people in attempting to protect their lives and their health from the perilous meddling of destructive quackery? It goes beyond belief; it were a monstrous anomaly in British jurisprudence.

The truth, however, seems to be, that the laws relating to this subject are rather in an imperfect state than in a state of deficiency—rather neglected than unprovided by our legislators. We can trace back pretty far the legislative arrangements which have been made concerning the practice of unlicensed practitioners. Lord Coke, in his fourth Institute—in which he states, that if one who is not a regular surgeon take upon him to cure a man, and the patient die, it is felony—refers us for his authority to the enactments of Edward the Third, and to Britton, the jurist, who wrote in the time of the third Henry. So that whatever weight is to be attached to “the wisdom of our ancestors” in the affair, is here at our service; and the necessity of that which reason first pointed out, has been perfectly understood and provided for by the common law at so distant a period as five centuries since—as long ago, in fact, as the

first dawning of a definite profession of physic in England.

“Yet Sir Matthew Hale,” as Blackstone says, referring to the above passage from the Institutes, “very justly questions the law of this determination.” But so far as we can see, and with all due deference to Blackstone, who by the way does not seem to have considered the matter with his usual attention, the strength of Hale’s reasoning is altogether centred in the oft repeated appeal to our humanity—“God forbid that any mischance of this kind (the causing of death by maltreatment) should make any person, not licensed, guilty of murder or manslaughter.” The whole passage is this:—“I hold their opinion to be erroneous that think, if he be no licensed chirurgeon, or physician, that occasioneth this mischance, that then it is felony; for *physic and salves* were before *licensed* physicians and chirurgeons; and *therefore* if they be not licensed according to the statute, 3 Hen. 8, or 14 Hen. 8, they are subject to the penalties in the statutes; but God forbid,” &c. The argument here is evidently two-fold, and comes simply to this—that there were *unlicensed* physicians before there were *licensed* ones, and that our better feelings should interfere in protecting persons guilty of malpractice, and ward off from them that punishment to which they would otherwise be exposed merely for being unlicensed.

Neither of these grounds appears to us to have much weight.

In the first place, with respect to what he says touching physic and salves, the same reasoning would apply to prove the invalidity of most of those noble orders and institutions which do honour to human nature, and demonstrate the progress of society towards perfection. It would tend to prove, that because there were principles of justice and honesty in the world before there

were duly authorized judges, that therefore any man might, without incurring censure, take upon himself to interpret and expound the law; that because there were seeds of piety, and sentiments of morality to be discerned in mankind before there were regularly sanctioned ministers of religion, that therefore it should be permitted any man to act in that capacity—to instruct, or to delude the people as it should seem to him good. It is needless to say more about the abuses and absurdity into which such arguments would lead.

And, secondly, the appeal to our moral sense and forbearance—though we attach somewhat more of weight to it—will be found only admissible with considerable restrictions—and these, restrictions which even Sir Matthew himself could scarcely refuse to admit. If he mean simply, that because cases will sometimes occur in which no regular licensed help can be procured, and that those whom humanity might induce to lend assistance would be deterred from so doing by a dread of the law if rigorously enforced—or that having rendered their assistance, it would be cruel to punish them merely because they were unlicensed—we agree with him fully, and are ready to re-echo his feeling apostrophe. But if he make the possibility of the occurrence of such cases as we have now described, a ground for extending protection to the unrestrained interference of irregular practitioners, most unequivocally and heartily do we dissent from him. What! to put on the same footing the man whom his humane feelings call upon to bestow his best aid in alleviating the suffering of his fellow-man in the absence of better qualified medical assistance, and the sordid wretch who, dangerously ignorant of what he is about to do, proposes, and undertakes for lucre sake, and for that alone, to tamper with health and life, and to pursue his reckless course at all hazards—can there be a

more unguarded, a more dangerous assumption? And yet it is not unfair to attribute such a meaning to the words of the learned judge: he expresses himself clearly and forcibly enough.

The late Baron Hullock on Van Butchell's trial, in citing Hale's view of the state of the law as given above, added, "that in remote parts of the country many persons would be left to die, if irregular surgeons were not allowed to practise." This is an addition that imparts but little strength to the argument; in so far as it sets forth the necessity of the case, we have already disposed of it; and for the rest we cannot see how it tends in the slightest degree to invalidate our position—that unlicensed practitioners ought to be restrained; on the contrary, it manifestly strengthens it, just as the exception always tends to corroborate the general rule.

Nothing is to be expected from the modesty of quacks. The temptations they have to pursue their craft—the willing dupes they meet with in their walks—their increasing confidence—their accumulating wealth—all tend to confirm them in the steady practice of delusion. Nothing but the occurrence of palpable mischief can stay their progress. Nothing but the fear of the infliction of punishment can deter them.

Yet the trial of Long is over—the verdict recorded—the fine paid—the prisoner discharged to resume his criminal courses—and what, after all, have the public gained, if it is still to be understood that the law of the case is doubtful? Nothing; whilst the very doubt will but constitute the best encouragement for the empirical fraternity, and the matter eventually become purely a question between the people and those impostors. The protection which might have been expected from "the profession" has been well nigh, if not entirely, rendered powerless by the perverted readings of what, to unsophisticated

minds, might appear to be plain and intelligible law. In despite of charters and acts of parliament, unlicensed practitioners are permitted to roam at large, and are encouraged too—and every demonstration on the part of the privileged corporations to check and restrain them, has only met with derision on the part of the public. The public will now suffer for it: the mischief has come home to them; and we trust they will be made fully sensible that the question now is, whether or not they are to be exposed unprotected to the practices of hoards of adventurers (for hoards there will presently be,) who come to prey upon their persons and their property, steadily relying on the wilful ignorance which is abroad concerning the proper qualifications of the medical character, and on the glorious uncertainty of the law as it relates to the regulation of medical practice.

This is, we think, the simplest view that can be taken of the question. It is entirely a personal matter between the public and those *soi-disant* “practitioners of medicine,” and it will behove the public to look well to it, that they suffer no national calamity, like that of plague, from the untoward state of the law, and the unbounded license which they seem so well disposed to concede to medical impostors.

ANOTHER VERDICT OF MANSLAUGHTER AGAINST MR. ST. JOHN LONG.

AT page 222 will be found the details of a coroner’s inquest on the body of another unfortunate lady, who died a few days ago in consequence of sloughing, produced by the application of Mr. Long’s embrocation; she had previously been in good health, and no internal disease of any kind was found on examination after death. The details will be read with painful interest, and constitute an instructive commentary on the luminous charge to the jury delivered by Mr. Justice Park in the case which we recorded last week.

EXPENSE OF PROSECUTING ST. JOHN LONG.

WE differ from the Editor of the *Lancet* nineteen times out of twenty on public questions—but that is no reason why we should not support him on the twentieth occasion, if he then advocates the cause of science and truth against ignorance and falsehood. That he has done this in the part he has taken with regard to Mr. St. John Long we have pleasure in admitting—and as we observe it to be stated by Mr. Wakley that the expense of conducting the prosecution has hitherto been borne by him, we call upon the public in general, but on the members of our own profession in particular, to come forward and relieve our contemporary from a burden which it would be disgraceful that we should suffer him to bear. The simplest mode, as it appears to us, would be to send subscriptions to the *Lancet*-Office, as soon as the amount of expense incurred is made known:—we would offer to receive them through the medium of the *Gazette*, but there are obvious reasons why such a proceeding would be indelicate.

RESPECTIVE CLAIMS OF DOCTORS GOOCH AND GRANVILLE TO THE SETTLEMENT OF THE QUARANTINE QUESTION.

IN another part of our present number will be found a letter of Dr. Granville, a rejoinder to a late reply by one of Dr. Gooch’s friends, which we also published in this journal. We do not wish this discussion to proceed further. All the facts are now before the public—if the public take any interest in drawing conclusions from them. It may just be observed that those facts chiefly refer to dates, upon which the whole merit of the discussion is made to rest, it being the great object of inquiry on either side to determine which of the two, Dr. Gooch or Dr. Granville, first satisfied ministers as to the propriety of settling the laws of contagion and quarantine in their present state; while it seems to be forgotten altogether that there is any necessity to prove that the settlement was in the first instance owing to either. Too much seems to be assumed. The resources of Ministers are supposed to be rather limited, and the labours of the Committees to have

been easily relieved. Without entering further on the consideration of the subject, which we think has gone quite as far as it deserves, we may state briefly, by way of *résumé*, the chief circumstances which have been brought forward in the letters alluded to. In 1819 a Plague Committee of the House of Commons sat, and decided on the correctness of the contagion doctrine. Dr. Granville was one of the witnesses examined on that occasion, and about the same time published his letter to Lord Goderich.

In 1824 a Foreign Trade Committee sat, and incidentally entertained the question of contagion. On this occasion, also, Dr. Granville gave his testimony before the House.

About the beginning of the year 1825 the quarantine laws began to be agitated, and now Dr. Gooch entered the field apparently for the first time. In a letter to Mr. Southey, dated April 1825, he says he had put into Mr. Peel's hands some of the evidence he had collected, for the purpose of "staying the mischief."

In May Dr. Granville wrote and published a letter to Mr. Huskisson—a document to which he attaches paramount importance in the final arrangement of the question. However this be, in June the law of quarantine was finally settled in parliament.

It was not till December 1825 that Dr. Gooch's celebrated article in the *Quarterly Review* appeared. In whatever terms the author may have spoken of this favourite production in his reprint of it, neither his biographer, nor the correspondent who defends Dr. Gooch against Dr. Granville's charge, claims for it other merit than that of having tended to produce the present satisfied state of public opinion with regard to the contagious nature of plague, "by an admirable exposition of all the arguments and facts upon which the question rests." In this sense the biographer is strongly justified in assuming that Dr. Gooch had a principal share in the merit.

As to the vaunting strain in which Dr. Gooch himself speaks of the article in his Appendix, much allowance should be made for the peculiar state of feeling, arising from ill health, under which he prepared the latter work for the press; while we know not what excuse can be made for the terms of self-com-

placency and satisfaction in which Dr. Granville describes the importance of his own efforts. We refer to his expressions in his former letter, which appeared in our No. 151.

RESPECT SHEWN BY THE FRENCH GOVERNMENT TO THE MEDICAL PROFESSION.

AN "ordonnance" has just appeared conferring the decoration of the Legion of Honour on MM. Rostan, Bielt, Lallemant, Andral *fils*, Chomel, and Barrael. Not many months ago several medical men in Paris were created Barons. The document above-mentioned is followed by a report from the Minister of the Interior to the King, from which we subjoin an extract. "Medicine is at once the noblest of the sciences, and the most useful of professions—nevertheless it offers but few resources to those who practise, or to those who teach it. By the very nature of their pursuits physicians seem to be in some degree excluded from the ordinary paths of ambition. It is therefore just that the government should bestow upon them a large share of the honours awarded to merit." Such is the feeling on the other side of the channel; but we fear the estimation of science is a virtue that flourishes not in the climate of England. We have not space to enlarge on the subject at present, but we may possibly return to it next week.

DISSENSIONS AT THE LONDON UNIVERSITY.

As we have expressed ourselves strongly on the proceedings of Dr. Alexander Thomson in reference to the London University, we think it right towards him to state that he has published (in the *Medical and Surgical Journal*) a document containing letters which make it apparent that he was countenanced and supported in what he did, or to use his own words, "made a tool of" by some of whom a different line of conduct might have been expected. As it now stands, it is a very awkward story. For the violence of Dr. A. Thomson's expressions, some palliation is to be found in the obvious excitement under which he labours. If the others who

are implicated have any explanation to offer, they will probably deem it expedient not to delay its publication.

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

MEATH HOSPITAL*.

DISEASES OF THE LIVER.

Abscess in the Right Lobe of the Liver—Puncture of the Gall Bladder—Escape of the contents of the Abscess by the Intestines—Subsequent Abscess of the Left Lobe bursting into the Peritoneum.

BERNARD REILLY, aged 39, a butler, 15th August, 1828. This man was attacked for some weeks before admission with symptoms of hepatic inflammation, at first rather obscure, but ultimately more distinct, and attended with slight jaundice of three days' duration; for these he was not treated with much activity, and about three weeks before admission he was affected with shiverings succeeded by sweatings. On admission the shiverings were not well marked or regular, but he laboured under nocturnal heat and perspirations. He then complained chiefly of cough and nausea; he was not jaundiced, and the stools presented a natural appearance; the right side was found to be dilated one inch and a half, but the intercostal spaces were not distended. The patient complained of great soreness from the fourth rib downwards; the right hypochondrium was full and tender; no fluctuation could be detected. On percussion the right side from the third rib downwards sounded extremely dull; examined by the stethoscope, the respiratory murmur was found to be generally feeble in the right lung, but from the fifth rib downwards it became extremely weak, and was only audible on a forced inspiration. There was no agophonia, bronchophonia, or bronchial respiration. He continued for a fortnight without any remarkable change, when the tumefaction increased.

On the 29th an incision of about two inches in length was made through the integuments, over the most tumid part of the hypochondrium, some layers of muscles were divided, the wound was plugged with lint, and kept open for six days, during which no matter appeared.

On the 6th September a circumscribed tumor, evidently containing fluid, appeared between the median line of the epigastrium and the termination of the wound. The patient was greatly sunk. On the following

day a lancet was pushed from the wound into the tumor, when some dark-coloured bile flowed out; the circumscribed tumor disappeared, but the fulness of the side remained. About four hours after this operation the patient expressed a sudden desire to go to stool; he had two very copious motions, consisting apparently of purulent matter and bilious faeces. Next morning the improvement was remarkable; the countenance, which for the last two days had been hippocratic, had recovered its natural expression, the pulse was slower and fuller, and the patient expressed great relief. On examination of the belly the tumefaction was found much diminished. In a few days all swelling of the right hypochondrium had disappeared, and the sound on percussion in the infra-mammary region, had become clear. The patient was put on a generous diet, and for some days improved so much as to be able to take exercise. A diarrhœa, however, continued from the time of the disappearance of the tumor, and resisted every attempt to check it, while emaciation proceeded rapidly.

On the 3d October, twenty-three days after the subsidence of the first tumor, a small hard swelling was observed in the epigastric region, towards the left side; it was about the size of an egg, and slightly painful; this swelling increased daily, and soon became fluctuating. The diarrhœa continued.

On the 16th he was attacked with excruciating pain in the epigastrium. This returned several times so severely as to throw him into convulsions, and was followed by great tenderness and swelling of the abdomen, extreme prostration, and alteration of the features. The pulse became thready and weak; the epigastric tumor wholly disappeared; in this state he remained for eight days, the diarrhœa having continued till his death, which took place on the 24th of October.

Dissection, 24 hours after death.—Body greatly emaciated; belly tympanitic, some œdema of feet. An incision was made through the right sterno-clavicular articulation to the left, and thence carried through the cartilages of the ribs downward to the pubes. The flap being turned back, the thoracic and abdominal cavities were exposed.

Thorax.—The lungs presented nothing remarkable. The pericardium was universally adherent to the heart, which was otherwise healthy.

Abdomen.—The peritoneal cavity was found filled with a semi-transparent fluid, containing a large quantity of flocculi, forming in various places masses, having the consistence of jelly. The serous membrane was of a deep red colour, and mottled appearance. In some places the gelatinous effusion was in a commencing state of organization, assuming an appearance of lay-

* Dublin Hospital Reports.

ers, and presenting blood-vessels of a deep blue colour in its interior. The liver was adherent to the diaphragm and abdominal parietes over the whole convex surface. The adhesions of the right lobe were strong and ancient; those of the left, soft and recent. In the left lobe an abscess of the size of an orange was discovered a little above the lower edge, and communicating inferiorly with the peritoneum by a fistulous opening, sufficiently large to admit a quill. It contained a yellowish puriform liquid, mixed with fragments of hepatic substance, softened, and of a yellowish colour; interiorly and posteriorly this alteration extended for about an inch into the substance of the liver. The right lobe being examined, a cavity lined with a semi-cartilaginous membrane of a dark-grey colour was found in the inferior portion. This communicated with the duodenum by an opening large enough to admit the finger with ease. The hepatic substance was generally granular and of a livid colour, mottled with yellowish white. The gall-bladder contained natural coloured bile; it presented superiorly a spot exactly corresponding to the size and form of a lancet puncture; this was covered by a thin transparent membrane. The pyloric orifice of the stomach was narrowed, with thickening and induration of all its coats, particularly the cellular and mucous. The mucous membrane of the duodenum was indurated and thickened; the remaining portions of the intestinal tube appeared healthy; spleen enlarged; kidneys healthy; brain not examined.

Vast Hepatic Abscess.—Peritonitis consequent on the Operation of opening the Abscess.

Eliza Clare, aged 20, December 31st, 1828. This woman was admitted in the last stage of her illness, which had been for four months standing. She was emaciated to a great degree, and laboured under severe hectic fever. The right side was much dilated, and the chest sounded dull from the fifth rib downwards, and the liver could be felt extending to nearly the spine of the right ilium. In the centre of this tumor there was a considerable elevation, in which distinct fluctuation could be felt. Her distress from the pressure and weight of the tumor was extreme.

On the 6th of January a caustic issue was applied over the abscess; the slough did not separate until the 15th, and although the matter appeared to be close to the abdominal parietes, it did not shew any disposition to escape. On the following day a small valvular incision was made through the ulcer left by the detachment of the slough, when a few ounces of greenish puriform matter were evacuated. This operation was followed immediately by excruciating pains in the lower portion of the belly, and

a sensation as if this was caused by the escape of matter into the peritoneal cavity.

In three hours after the operation there was violent pain in the abdomen, increased by pressure on the extension of the knees, which she kept constantly drawn upwards. The countenance was anxious and collapsed; constant vomiting and screaming; pulse 140, small and wiry.

A blister was applied to the inside of the arm, and the vesicated surface ordered to be sprinkled with morphia. She was allowed porter, and took gr. ss. of opium every second hour. Under this plan of treatment the peritonitic symptoms entirely subsided in a few days. The wound closed, but the patient ultimately sunk on the 12th of Feb. in a state of complete exhaustion, twenty-seven days after the operation.

Dissection, ten hours after death.—Thorax; Heart of the natural size. The capacity of the left ventricle was found to be greatly diminished. The inferior lobe of the right lung was found to be carnified. The remainder of the pulmonary organs presented nothing unnatural.

Absdomen: The liver extended to the anterior superior spinous processes of the os ilium on both sides, filling the hypochondriac and umbilical regions, and extending upwards as far as the third rib; its convex surface was universally adherent to the parietal peritoneum. A vast abscess occupied nearly the whole of the right lobe, containing upwards of four pints of purulent matter. Superiorly this abscess was covered by a layer of hepatic substance, immediately under the serous membrane, of not more than two lines in thickness. In the left lobe were several small abscesses. No fluid was found effused in the cavity of the peritoneum, nor were there any marks of inflammation having existed in that membrane at the time of her death, but a great number of organized adhesions were observed between the convolutions of the intestines, and also connecting the latter with the parietal peritoneum. The gastro-intestinal mucous membrane appeared softer than usual, but presented no morbid vascularity.

Abscess resting on the Convex Surface of the Liver, communicating with the Lung, and opening externally.

Honor Fletcher, aged 23, was admitted on the 25th of May, 1829, with febrile symptoms of nine days' standing, preceded for three weeks by copious hæmoptysis; she had amenorrhœa for the last twelve months, but had been otherwise healthy.

On admission, the skin was hot, the pulse full and quick; she complained of general pains, but particularly of one very severe, which she referred to the region of the liver; this was increased by coughing, pressure, or motion; there was a distressing short cough,

with yellow tenacious expectoration; appetite not much impaired. On percussion we found dulness of the right side, both anteriorly and posteriorly; here the respiratory murmur was only audible during forced inspiration. Leeches were applied, and blue pill and taraxacum exhibited: in the course of four days an uncircumscribed puffy tumor appeared over the liver, between the seventh and ninth ribs. An incision was made through the integuments, but no matter given exit to. The hæmoptysis returned, and the cough became very troublesome. Poulices were diligently used, and on the 10th of June the abscess was opened, when a great quantity of bloody puriform matter escaped. At this time the hæmoptysis ceased, and the patient improved considerably for about three weeks, when the abscess again made its appearance; she would not allow any operation to be performed, and shortly after this left the hospital.

She was re-admitted on the 13th of July, with an enormous abscess in the former situation; this was opened, and about a pint of dark-coloured matter given exit to. On the next day the abscess presented the appearance of a very extensive anthrax, upwards of six inches in diameter, and two in depth; its sides elevated, irregular, and covered with a whitish slough, which could be detached by pressure; she had cough, with muco-puriform expectoration and constant diarrhœa; in this state she continued for a fortnight, when, on removing the dressings during our visit, we observed that when she coughed, air escaped with great force from the bottom of the wound, and was also sucked in during inspiration with a whistling sound. Between the eighth and ninth ribs a fistula was discovered, capable of admitting a small quill, through which a probe could be passed upwards and inwards for about three inches, when it was impeded by a solid resisting body.

The infra-mammary region sounded clear on percussion; examined by the stethoscope, the respiration was cavernous, and accompanied, during inspiration, by a sound like the tick of a watch: when she coughed or made a forced inspiration, a loud gargouillement was audible. There was no metallic tinkling, bourdonnement, or pectoriloquism, but the voice resounded strongly from the sixth rib upwards, while anteriorly and posteriorly the respiratory murmur appeared natural. She died on the following day.

Dissection.—Great emaciation; the external sore extended from the sixth to the tenth rib; it was about four inches in breadth; between the eighth and ninth ribs the fistula was plainly observable. On opening the abdomen the serous membrane was found healthy, with the exception of that portion which covered the liver laterally and supe-

riorly. Here the liver adhered to the diaphragm. On the centre of the convex surface of the liver we found the base of the abscess, formed by a circular portion of thick false membrane of about two inches in diameter, external to the hepatic peritoneum, but producing a depression on its surface: the costal portion of the diaphragm, for an extent corresponding to the base of the abscess, was destroyed, but adhered round its edges. This abscess communicated with the lung by a perforation through the diaphragm, of about the same size as the external fistula; this led into an abscess in the lower lobe of the right lung, which was narrow, elongated upwards, and presented many of the characters of a pneumonic abscess; it had no lining membrane, and communicated with numerous bronchial tubes; around it the pulmonary tissue was of a greyish-white colour, softened, but not granular. The diseased portion did not terminate by any distinct line, and occupied about two-thirds of the lower lobe, which was universally adherent to the diaphragm, and for about three inches to the costal pleura: the remainder of the lung was healthy.

The mucous membrane of the stomach was pale and soft, lower portion of ileum red, and presenting some aphthous ulcerations; mucous membrane of the colon covered with fungous elevations, and numerous aphthous ulcerations.

It is a singular circumstance, that abscess of the liver, hitherto a very rare disease in Dublin, should have been extremely frequent during the last year; besides the cases we have detailed, several others were observed in our wards, and in most of the hospitals of Dublin similar cases occurred.

ST. GEORGE'S HOSPITAL.

CASES OF WOUNDS OF THE SCALP AND THEIR CONSEQUENCES.*

CASE 1.—*Slight Scalp-wound—Bone denuded—Cure.*

JOHN REED, aged 25, a sturdy-looking bricklayer, was admitted on the 15th of June last, under the care of Mr. Babington. There was a small irregular scalp-wound at the vertex of the head, without much surrounding tumefaction. The bone was denuded for a small extent. There were fullness of pulse and heat of skin.

The accident had occurred on the preceding afternoon, from a brick falling on his head with such violence as to be itself split into three pieces. He was slightly stunned at the time. The treatment consisted of two bleedings and moderate purgings. On the eighth day the wound was healed, and

* From the Medico-Chirurgical Review.

in two or three days more the man was discharged cured.

CASE 2.—Slight Scalp-wound—Bone denuded—Symptoms of Compression—Cure.

James Patterson, ætatis 60, admitted July 16, 1830, under the care of Mr. Keate.

Wound of the scalp on the crown of the head, leading down to the bone, which is denuded for the extent of a half crown piece. Sensibility not quite perfect. Besides this, he has several other injuries, particularly an ugly lacerated wound of the lower lip. A short time before his admission he had been kicked in the mouth by a horse, and the scalp-wound appeared to have been inflicted by the violence which the occiput struck the ground. He had been insensible for some time, but had not vomited.

The scalp-wound was dressed with adhesive plaister, and the other injuries properly attended to. In the course of two hours the pulse became full, sharp, 96—he was less sensible—there was a kind of stertor—and there were some convulsive twitchings of the lower limbs.

V. S. ad $\tilde{3}$ xij.

The bleeding afforded much relief, and the blood was buffed and cupped. Next day he had again relapsed into some degree of stupor—the pulse was 80, full—the skin hot—the pupils contracted.

He was bled a second time, and had antimoniated salines. He was bled again on the 18th. The head symptoms had already subsided, and the general excitement now passed away—the scalp-wound gradually healed, and no scale of bone was thrown off—and on the 11th of August the patient was dismissed from the hospital cured.

The preceding case was chiefly remarkable for the rapid manner in which reaction was established, and the early buff upon the blood. It is probable from these circumstances, as well as from the facility with which the head symptoms disappeared, that the latter were rather occasioned by the inflammatory action set up in the brain than by extravasation. The two cases prove that portions of the skull may be denuded of pericranium and exposed to the influence of the atmospheric air, without any exfoliation ensuing in consequence.

But these accidents may give rise to common erysipelas of the scalp, or to a peculiar affection, allied to erysipelas and running into it, and having its seat in the cellular membrane beneath the tendon of the occipito-frontalis muscle. And first of erysipelas of the scalp.

CASE 3.—Scalp-wound—Bone exposed—Erysipelas—Active Treatment—Recovery.

Anthony Hitchcock, a soldier, ætatis 30, admitted Nov. 24th, 1827, under the care of Mr. Jeffreys.

Has a jagged wound, of almost sloughy appearance, on the left side of the forehead, with the bone slightly exposed. Another contusion behind the ear. Much pain in the head—eyes suffused and heavy—pulse strong and labouring—tongue furred—bowels confined.

States that four days ago he fell from a coach, was picked up insensible, and was carried to some hospital. Here he remained for a day or two, but on recovering his sensibility he left the hospital, and went to the public-house where he was billeted. He lay in bed, without medical advice or assistance, till the time of his admission into this institution.

Wounds dressed. V. S. ad $\tilde{3}$ xx. Calomel, gr. ij. Pulv. jalapæ, gr. vj. 4tis horis.

He was relieved by the bleeding, but the bowels not having been opened, he took the senna draught every three hours until they were so. On the 25th there was still some pain in the head—the tongue was furred—the pulse rather more full.

Cat. lini capiti—V. S. ad $\tilde{3}$ x. II. salin. c. mag. sulph. 3ss. 6tis horis. P. c. calomel.

The bleeding produced slight faintness, and in the evening he had some shivering: he had felt the same on the preceding day. On the 26th he was suffering much from head-ache and pain in the forehead—pupils rather dilated, with intolerantia lucis—pulse frequent and full—tongue whitey-brown and thickly coated—thirst—anxiety—pain just under the left nipple, where, on examination, a rib was found to be fractured. The blood drawn on the 25th was buffed and cupped.

Bandage to the chest. Lot. spt. fronti V. S. ad $\tilde{3}$ xv.

On the 27th the erysipelas had rather extended, with head-ache, thirst, furred tongue, pulse 92 and hard; the bowels were much purged. He was ordered to be bled to 20 ounces. In the evening he was not relieved, though the hardness of the pulse had disappeared; the pupils were contracted and sluggish; the patient inclined to be delirious. He passed a restless night, and on the next morning the erysipelas had extended down the right cheek; there was less pain in the head, the right side of which was œdematous; the tongue cleaner; pulse frequent and full; constant nausea. The blood drawn on the preceding day was a little cupped, but instead of the common buff, it showed upon its surface a thick layer of perfectly translucent albumen, resembling jelly. The clot was loose. The bleeding was ordered to be repeated to 20 ounces, but 30 were taken by mistake; this blood shewed no trace of inflammation. The erysipelas now began to fade, the pains in the

head and symptoms of pyrexia, passed away, a state of considerable weakness ensued, but the wounds healed favourably, convalescence followed, and on the 9th of January the patient was discharged from the hospital cured.

CASE 4.—Scalp-wound denuding the Pericranium—Erysipelas—Recovery*.

W. Kelly, æt. 36, admitted Feb. 20th, 1829, under the care of Mr. Keate.

On the 17th he had received a small scalp-wound on the posterior part of the side of the head, by which the pericranium was denuded; there were no symptoms of concussion. The wound was dressed, and he resumed his work, but a rigor ensued, and he applied at the hospital with urgent symptoms of pyrexia on the 19th. When admitted, on the 20th, he complained of much pain in the head, the pulse was full and hard, the tongue white and coated. The lips of the wound were asunder. He was bled to 10 ounces, had calomel and house-physic, and was ordered salines, with antimony and magnes. sulph., every six hours. In the evening the bleeding was repeated, and the blood drawn on both occasions was highly buffed and cupped.

On the 21st an erysipelatous redness appeared upon the scalp; the pulse was 112, the skin hot, the tongue white. He was ordered the draught of the acetate of ammonia.

The erysipelas extended over the forehead, accompanied with an edematous condition of the scalp, particularly near the wound. On the 23d, the pulse being frequent and not so full, the skin tolerably cool, the tongue moist, the bowels rather purged, and the erysipelas extending over the face, he was ordered the liq. ammon. acet. with mist. camph. and tinct. op. $\mathfrak{m} \times$. 6tis horis. On the 24th the face was much swollen and of dull red colour, the tongue brownish in the centre, the pulse frequent without force, the manner occasionally incoherent. He was put on the decoction of bark and the liq. ammon. acet.

On the next day the erysipelas had ended in desquamation of the cuticle, but still much swelling and a brownish red colour of the forehead, face, and neck, remained. The puffiness and œdema about the side of the head were diminished. The pulse was lower, and the tongue more brown and dry. He was still light-headed and exceedingly restless and fidgetty, but would answer questions rationally enough. The parts had hitherto been treated with cold spirituous lotion, but now the erysipelas ointment spread on a linen mask was applied to

* As the bone itself was not denuded, it is hardly consistent to introduce the case in this place. The tendon of the occipito-frontalis, however, was torn, which makes the injury more severe than a superficial scalp-wound.

them*. From this time the improvement was progressive, and convalescence was scarcely retarded by the formation of one or two subcutaneous abscesses, which were opened with the lancet. In the course of a short time the patient was discharged cured.

CASE 5.—Scalp-wound—Bone denuded—Erysipelas—Recovery.

George Foley, a labourer, ætat. 32, admitted April 28th, 1829, under the care of Mr. Keate.

On the right side of the head, a little above and anterior to the ear, a jagged scalp-wound, leading down to exposed pericranium, and bare bone. The patient was not perfectly sensible, unable to answer questions, restless, and fidgetty; the pupils sluggish; the pulse but little affected. The portio dura on the same side appeared to be slightly paralyzed. There was a trifling injury about the knee-joint. The injury had been inflicted by a fall from a scaffold forty feet in height; he had been completely stunned at the time, but had not vomited. The wounds were dressed, and cold lotion applied.

In the evening the pulse rose, and he was bled to 10 or 12 ounces; had a purge; and took salines with sulphate of magnesia every four hours.

On the next day he was so far recovered as to give a very clear account of the manner in which the accident had happened; there was more pulse, and the pupils were a little contracted; the paralysis of the portio dura, if such there was, had diminished. In the afternoon he became flushed, and the pulse had more force; in the evening he was bled to 10 or 12 ounces.

30th. Drowsy and heavy—pupils rather more contracted—pain in the site of the wound, which looks foul, and has been poulticed—pulse full, but not hard—skin warm—no rigor nor sickness. Blood drawn last night is not inflamed. Antimony was added to the salines. On the 1st of May there was less pain, but the pulse had some fulness and jerk, and the man continued heavy and drowsy.

V.S. vespere ad $\bar{\text{3}}$ x.

He passed a bad night, and on the 2d all the symptoms were more severe. More head-ache—pulse frequent and bounding—skin hot—scalp tender about the wound, and tumid. He had experienced a kind of chill, not amounting to a rigor. He was bled to $\bar{\text{5}}$ viii. and soon afterwards the blood shewed the buffy coat. In two or three hours another vein was opened, and 30 ounces of blood abstracted. This had a marked effect upon the pulse, the skin grew pale, and perspira-

* The erysipelas ointment consists of equal parts of cerat. calamine, ceratum saponis, and unguentum plumbi acetatis.

tion succeeded. At 5. p.m. reaction had not set in, the pulse was soft, the patient in a tranquil state.

Next day an erysipelatous blush had shewn itself upon the forehead, attended with tumefaction of the scalp. The skin was moist, the pulse soft, the tongue whitish, the headache trifling. He was ordered effervescing saline draughts. On the 4th, the erysipelas had extended down the forehead to the face, and the tint was very pale. The pulse was soft, and the other symptoms as favourable as could be wished. On the 5th the patient felt low, and bark was exhibited, in combination with the liq. ammon. acet: afterwards the bark was given alone, a generous diet was allowed, convalescence made speedy progress, and in the course of a fortnight or three weeks the patient was discharged perfectly well.

EDINBURGH ROYAL INFIRMARY.

Osteo-Sarcoma of Superior Maxillary Bone—Excision.

JANET CAMPBELL, æt. 26, admitted under the care of Mr. Liston, Sept. 20th. There is a tumor, the size of an orange, in the situation of the left antrum maxillare: it projects forwards, distorting the features, and feels hard and unyielding. The superimposed integuments are not discoloured, nor traversed by enlarged venous trunks. The orbit is not involved or deformed, neither are the cavities of the nose. A fleshy tumor involves the alveoli on the left side, and a part of the hard palate; it is invested by the mucous membrane, much thickened; anteriorly it is firm; posteriorly it yields slightly to pressure. Along its lower surface there is an excavation in which the teeth of the lower jaw rest when the mouth is closed. The teeth on that side have been extracted. Has occasionally a sense of weight and distention in the tumor, but little or no pain. There is no affection of the lymphatic glands of the neck or face, and the general health is unimpaired.

States that four years ago she received a blow on the left cheek by falling on the corner of a table. Little attention was at that time paid to the accident, but about two months and a half afterwards one of the molar teeth gradually loosened, and dropped out. Then a small fleshy tumor began to project from the surrounding gum, and slowly extended till the greater part of the alveoli on that side became involved, and the teeth loosened. Four months after tumor was first observed, all the teeth in the left side of the upper jaw were extracted, a perforation was made through the gum into the antrum, and a small quantity of puriform matter evacuated. The aperture was kept

open, and various washes injected: about a year ago it closed, and a slight discharge of matter flowed from the left nostril for some time. A perforation was again made into the antrum, but no matter came away. The cheek now began to enlarge, and its increase was slow; but during the last three or four months the tumor was developed rapidly.

Mr. Liston stated that from the hardness and prominence of the tumor, its being evidently circumscribed, its slow progress at first, its having commenced in the gums, the absence of lancinating pain in it, and of discolouration and vascularity in the superimposed integuments, he conceived the disease to be of an osteo sarcomatous nature, not that soft medullary tumor which so frequently infests the antrum, commencing in it, involving the deep and internal parts, and not making its appearance externally till all attempts at its removal must fail from the deep extension of its malignancy. That in these circumstances excision of the superior maxillary bone, to which the tumor was evidently limited, was warrantable, and also called for, in consequence of the rapid increase which the disease had made latterly, and the risk of its degenerating into a formation of a worse character.

The operation was performed on the 22d. An incision was made, with a strong and straight bistoury, from near the inner angle of the left eye, to the free margin of the upper lip near to the labial fossa, detaching the nasal cartilage from the subjacent bone. Another incision was made from the angle of the mouth to the molar origin of the masseter. The triangular flap thus formed was then dissected up towards the orbit and os malare, so as to expose the tumor completely. The molar connexion of the bone, and the hard palate to the left of the mesial line, were divided by means of a small saw; separation of the other attachments was effected with the strong bone-pliers and the bistoury. The soft palate was uninjured. Hæmorrhage was restrained during the operation by the assistant compressing the carotid. Not more than one or two ounces of blood were lost; and after removal of the bone not one ligature was required; there was merely a slight oozing from the surface. Compresses of lint were placed in the cavity, and the facial flap having been replaced, was carefully approximated and retained by interrupted and twisted sutures.

By the third day adhesion of the flap was perfect, the stitches and needles were withdrawn and a few slips of adhesive ribbon placed over the part. The lint was gradually removed from the cavity, which was found florid and granulating.

No untoward symptom has occurred; the patient keeps the cheek supported by dossils of lint, and the internal wound is contracting rapidly by healthy granulation. The coun-

tenance is rather improved, certainly not disfigured; and the eye, though deprived of the orbital plate of the maxillary bone, has its natural appearance, excepting a slight eversion of the lower lid.

The tumor was found to be purely osteosarcomatous; at one point near its centre it had become soft, and a small quantity of pus was deposited. It was entirely limited to the removed bone.

DEATH OF ANOTHER FEMALE,

Alleged to be in consequence of the Treatment adopted by

MR. ST. JOHN LONG.

Coroner's Inquest on Mrs. Lloyd.

YESTERDAY (Oct. 10) at 11 o'clock, J. H. Gell, Esq. and a highly respectable jury, assembled at the Wilton Arms, Kinnerton-Street, Knightsbridge, to inquire into the death of Mrs. Colin Campbell Lloyd, aged 48, the wife of Captain Edward Lloyd, of the Royal Navy, whose death was alleged to have been occasioned by the treatment she experienced under the hands of St. John Long, of Harley-Street.

The inquiry excited the most intense interest, and the Jury-Room was crowded to excess, principally by gentlemen of the medical profession, anxious to hear the result of the proceedings.

Mr. Wheatley, a barrister, attended on behalf of the family of Mrs. Lloyd, and Mr. Wooller attended to watch the proceedings for St. John Long.

After the jury were impanelled, they proceeded to view the body of the unfortunate lady, at her lodgings, No. 33, Wilton-Place, and on their return the following evidence was adduced:—

Mr. George Vance, of No. 27, Sackville-Street, Piccadilly, surgeon.—I visited Mrs. Lloyd on the 21st of October last, which, as I was informed by her medical attendant, Mr. Campbell, was about ten days from the commencement of her illness. Mrs. Lloyd informed me that she had inhaled from a tube a few times at Mr. St. John Long's, in Harley-Street, and had been rubbed on the chest with a liniment twice; she did not say who rubbed her; the first rubbing, she said, produced no inconvenience, but the second a sense of burning heat; she stated that she was quite well at the time, and had not suffered any important indisposition for three years, which was the time I had attended her. On examining her chest I found a sloughing sore of great extent, (where she had, by her own account, been rubbed with a liniment,) which extended from the armpits across the chest in one direction, and from the collar-bones above, under the nipples in the other direction; in the middle of

this sore the soft parts covering the breast-bone were black and dead, but towards the circumference there was a little appearance of health, and the mortified parts were separating from the living; the stomach was much disturbed, and she was in a state of great exhaustion and despondency, frequently expressing a desire to die; in a day or two after my attendance some of the constitutional distress (by which I mean fever and irritation, as well as the sickness of the stomach,) subsided in a degree, and her spirits revived; the dead parts began to separate more freely, and in a correspondence with her friends I gave encouraging hopes of her amendment; no granulations, however, appearing in the clean parts of the sore, and the surface having become dry and flabby, exhibiting the appearance of the dissected parts of a dead body, I imparted to her friends the certainty of her death.

By Mr. Wheatley.—Mr. Campbell, a surgeon, and myself, together and separately, removed masses of putrid flesh. The breast-bone was found bare, and I believe that if the slough had been freely thrown off, the cartilages of the ribs would have been exposed also.

The deceased gradually grew weaker, and died on Monday morning, the 8th of November.

Mr. Wheatley.—Can you form any judgment as to the cause of the death of the lady?

Mr. Vance.—In my opinion the application of some corrosive matter, applied to the parts which I found in a state of mortification, was the cause of her death.

Mr. Vance added, that about three years ago he attended Mrs. Lloyd for an affection of the throat, which he considered to be globus hystericus. It was a nervous complaint, but soon disappeared. This was the only disease which he observed in Mrs. Lloyd; she was, in all other respects, a stout woman, and rather corpulent. He had never known any disease of that nature terminate fatally. Mrs. Lloyd said, that she had been persuaded to apply to Mr. Long.

Mr. Brodie, of No. 16, Saville-Row, surgeon, sworn.—I saw Mrs. Lloyd last Friday week with Mr. Vance. The witness here gave a similar description of the wound as Mr. Vance did. I should think that any mineral acid or arsenical application would produce such an effect; but I do not mean to say that either of these produced the effects in the present instance; it would not have been proper or prudent to make any application that would produce such effects on persons labouring under globus hystericus; the effects produced, such as I have described, were in my opinion sufficient to have occasioned death; I would not intentionally have produced such effects for any complaint with which I am acquainted; I do not re-

member having seen the same mischief produced by any local application that had been used as a remedy—excepting in the case of the late Miss Casbin.

By Mr. Wooller.—In some cases the applications in common use produce effects more violent than in other cases, and beyond what the practitioner may have intended.

Mr. Campbell, surgeon, of 23, Wilton-Place, said.—About the 1st of October, Mrs. Lloyd and her family came on a visit to my mother's house, and she appeared to be in sound bodily health. On the 12th of October I was requested to see her, as she was dangerously ill. She complained of pain on her chest, on examining which I found the wound which has been described. Mrs. Lloyd stated to me that she had consulted Mr. Long for an affection of the throat a few days before, and he told her that it arose from extensive disease of the lungs, they being full of small ulcers, and recommending her to inhale, which she did for a few days previously to her being rubbed at his house, which took place on the 10th and 11th of October. She stated that the first rubbing had no effect upon her; but that she suffered pain immediately after the application the second time, and that he then recommended her to apply cabbage-leaves to her chest, which she did. She stated, also, that the agony she had suffered on the 11th of October was very considerable, and that she would rather die than continue under Mr. Long's care, and requested me to attend her. I then took away the cabbage-leaves, and dressed the wound with common spermaceti ointment. She also told me, that Mr. Long was anxious to rub her again with the liniment, but she positively refused to submit to it; and he told her that if she wanted to heal the wound, she must do it with dry lint; that she had complained to him of having suffered from severe chills, for which he recommended her to take a glass of strong punch, and put her head under the bed-clothes; I considered Mrs. Lloyd to be in perfect health, excepting a nervous affection of the throat; I have heard the evidence of Mr. Brodie and Mr. Vance, and concur with them in opinion as to the cause of her death.

By Mr. Wheatley.—Mrs. Lloyd had no symptom whatever of disease of the lungs; the wound I have mentioned on the chest *extended twenty inches in length, independent of the inflammation which extended over the abdominal muscles, all down her sides, over the hip and over the shoulder.*

By Mr. Wooller.—The deceased told me that she was persuaded by her family to apply to Mr. St. John Long; I recommended her not to do so; there was no mortification on the wound when I was first called in to attend her on the 12th October; she then told me that she would not allow Mr. Long to come into her presence again, and from that day he never saw her.

Captain Lloyd was then examined.—He said he came to London with his wife and family on the 15th July; Mrs. Lloyd was in good health, but subject to a nervous affection of the throat when she took cold; she continued in good health, until she became ill from the rubbing of Mr. Long. On the 5th I accompanied her to Mr. Long's house; she merely had a conversation; she went on the following day, when she inhaled. On the 7th she inhaled again, also on the 8th; she went to him on the 9th, when she was rubbed, for the first time, across the bosom, as she described it to me; on the 10th October she told me that she had inhaled as before, and afterwards was rubbed—as they termed it, “rubbed out;” she told me that there was but a small portion of liquid in the saucer, but more was added when that was expended. She became so unwell while the rubbing was going on, that the rubber became alarmed and sent for Mr. Long, who did not come for some time; but when he did, he said it was nothing, and would soon go off, which it did after some time; but an odd sensation remained, which continued during the evening; she came home in her sister's carriage, and continued uneasy the rest of the day; she complained of cold and chilliness all the evening; a cold shivering fit came on when she retired to bed, and she took some hot wine and water; she had a restless night, and on the 11th October was unwell all day. There was a vivid redness across the breast where the rubbing had taken place, and a dark place in the centre of the breast, from which a discharge was taking place from under the cabbage-leaves, which had been applied by the directions, as she said, of Mr. Long; the large dark spot on her breast still got deeper in colour; the edges were white and all much puffed up; the pores of the skin on the black spot were expanded, but did not break. She expressed great surprise that Mr. Long did not call, and was inclined to be sick during the day, and could not take any nourishment, and complained of a dreadful burning heat in the breast. She passed a restless night, and on the morning of the 12th of October, on looking at her breast, it appeared to me that from laying on her back where even the matter discharged from the wound rested, it caused fresh blisters, some of which I cut to relieve her pain, as she complained much. A wicker cradle was forced to be made to place over her, to prevent the bed-clothes touching her. On this day I called upon Mr. Long, who expressed his surprise at not having seen Mrs. Lloyd to go on with her inhaling. On explaining her inability, and great sufferings, he said that was wrong, and contrary to his practice, that he would come in the evening, which he did, and found that she had applied some common blister-dressing to alleviate the heat and burning feeling. Mr. Long said

but he would rub it out, which Mrs. Lloyd exclaimed against, saying that she had suffered so much that she could not endure these parts being rubbed at all; the very idea of touching them, even by herself, was excruciating. Mr. Long said that the only thing necessary to be applied to the wound was old dry linen, to absorb. He then asked for a towel, and began rubbing it dry on the large black spot, as I suppose to absorb the discharge. Mrs. Lloyd said she had always healed any little blister by a simple blister-dressing; and Mr. Long said he saw no objection to her using it, and then departed.—During the time Captain Lloyd was giving his evidence he appeared deeply affected, and frequently burst into tears.

The Inquiry was then adjourned.

SECOND DAY.

The inquest was renewed to day (Thursday) at a quarter to twelve o'clock, before Mr. Gell, at the Wilton Arms.

Several of the Jury said they would hear nothing except that which affected the cause of death.

The Coroner thought, in justice to Mr. Long, they ought to hear any thing he had to adduce as to the cause of death, but nothing else.

Mrs. Elizabeth Campbell, No. 25, St. George's Place, St. George's, sworn and examined by Mr. Wheatley, on behalf of the deceased's family.—Captain and Mrs. Lloyd came to my house on a visit six weeks ago last Tuesday, viz. the 28th September. She was then in perfect health, with the exception of an occasional irritation of the throat. In a day or two afterwards she told me that she had been at Mr. St. John Long's, where she had seen ladies inhale. She told me that she had herself afterwards been at Long's, where she had inhaled and been rubbed.

[The part of Mrs. Campbell's evidence which follows is in keeping with that already given. It concludes with these words:—] From that time she continued under the care of Mr. Campbell, and Mr. Vance, until she died, which was on the 8th instant. She gradually grew weaker, and her sufferings were beyond any one's belief—they were dreadful—really dreadful.

By a Juror.—The deceased explained the whole process to me; she said the lotion with which she had been rubbed was in a saucer; a female rubbed her with a sponge; the colour of the fluid was that of the room in which deceased then lay (a light fawn); the second rubbing was rather painful; she had signed a book—which she believed was to the effect of a declaration, that she would not divulge either the colour or smell of the lotion, but for the benefit of others, and of the public, she did not think she had any

right to keep any thing secret that had been so fatal to herself.

When Mr. Vance came in he delivered a written certificate, signed by himself, Mr. Chambers, and Mr. Frankum, to the following effect:—

“By desire of the Coroner and Jury we have carefully examined the body of the late Mrs. Colin Campbell Lloyd, and we make the following report:—The surface of the body did not exhibit any appearance of disease, except the gangrenous ulcer on the chest, which has been measured, and extends from one arm-pit to the other—a space of 16 inches—and from the neck downwards to the parts below the nipples 9 inches.

“The mortified parts being removed, the collar-bones and some of the cartilages of the ribs were bare. The body generally remarkably fat. On examining the structures contained within the chest, the lungs were ascertained to be perfectly sound, free from adhesion to the pleura, and not even a spot that could admit of the suspicion of disease, either on the surface or internally.

“The heart and the great vessels were also quite healthy.

“The liver, spleen, stomach, and intestines, as well as all the other structures within the abdomen and pelvis, were in a state of perfect health.

“On the right side the thyroid gland was inflamed, and the structure a little changed from its contiguity to a deep part of the ulcer, but the other part of the gland was healthy. On examining the windpipe no disease appeared; the portion below the superior part of the ulcer, on its inner side, was considerably inflamed, and the vessels full of blood. The œsophagus, which became the subject of our particular attention, on account of the globulus hystericus, was quite healthy, but a little narrow at the upper part, which we are disposed to consider congenital, rather than arising from a disease, as there was no thickening of structure. We have further to add, that in our professional researches few had lived forty years with natural structures so generally healthy and fine in their proportions.”

After the above document had been laid before the Jury, the Surgeons were again examined in reference to it; but we have not space to enter into farther detail, nor is it necessary;—the account of the post-mortem examination needs no comment.

One or two witnesses were examined on the part of Mr. Long, but nothing in any degree calculated to explain away the evidence which we have given above was elicited from them.

At a late hour on Thursday evening the Jury returned a verdict of **MANSLAUGHTER**, followed by a prayer to the Legislature to take some steps for the prevention of quackery.

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SATURDAY, NOVEMBER 20, 1830.

LECTURES

ON

COMPARATIVE ANATOMY,

AS ILLUSTRATIVE OF

GENERAL AND HUMAN PHYSIOLOGY,

*Delivered in the Medical School of
Birmingham,*

By S. LANGSTON PARKER.

LECTURE IV.

*The Medulla Oblongata—Third, Sixth, and
Fifth Pairs of Nerves.*

GENTLEMEN—Our present lecture leads us to the consideration of the medulla oblongata and its nerves. A question here arises which it will be necessary to answer before proceeding farther:—"Is the brain produced from the spinal marrow, or is the latter formed and prolonged from the brain?" The whole body of anatomists of the eighteenth century—viz. Haller, Zemi, Willis, and Winslow, with Galen, Vesalius, Vicussens, and Beranger de Carpi—were partisans of the first opinion, that the spinal cord was produced by a prolongation of the brain;—when Gall, reviving the theory of Plato, and aided by a few dissections of the lower animals, raised himself against this doctrine, and overthrew the whole received dogmas of all the schools of Europe for a period of many centuries, by proving that the brain was formed by the spinal cord. This part (the spinal marrow) is formed, as we saw in our last lecture, in the fetus of the mammalia, and in the lower animals, before any appearance of the brain is perceptible; this organ being perfect in its organization long before the brain has traversed half the phases, preparatory to its ultimate and permanent development. The part which more immediately contributes to the formation of

the cerebral mass, is, however, the medulla oblongata, or upper part of the spinal column; the separate portions of which are directly connected, by means of their longitudinal fibres, to the principal elements of the brain. The medulla oblongata terminates the spinal marrow superiorly, and is sufficiently distinct from that part by the appearance of three distinct elevations on each lateral portion of the spinal cord.

The medulla oblongata (commencing at the tubercula quadrigemina, and terminating with the origin of the eighth pair) is composed of the corpora pyramidalia, two eminences situated on the anterior portion of the cord, one on either side the central fissure—the corpora restiformia, situated on the posterior surface, and the corpora olivaria, placed in the intervening spaces. The pyramidal bodies pass directly forwards, and terminate in expanding into the cerebral lobes. The restiform filaments expand into the lobes of the cerebellum, and the olivary bodies send forward fibres to form the tubercula quadrigemina, or optic lobes. These three parts of the cerebral mass are but bulbous terminations of these cords, or filaments, in certain pisces, shewing clearly their destinations in the higher orders*; and it is the expansion of these cords in various proportions which produces all the diversity of form and structure in the brain of vertebrate animals. The medulla oblongata presents us with the first degree of complication of the cerebro-spinal axis, or centre. It is not dependent for its existence upon either the brain or spinal marrow, being an unique nervous mass, with which all the principal nerves of the economy are united, as to a common centre. It is not, however, like the optic lobes, a bulb of nervous matter, presiding over a single sense, or function; but composed of many different systems, each destined to a particu-

* Vide representations of the brains of the cod and "*frigila volitans*," in Serres, Op. Cit. Pl. VII. Fig. 156 and 166.

lar action;—and as one or other of the functions to which the nerves arising from the medulla oblonga are appropriated arrives at its perfection of action and development, that part of the marrow on which it is inserted predominates over the rest by the appearance of a lobe of nervous matter elevated upon its surface. Thus we have a distinct ganglion on the medulla oblongata for the fifth and eighth pairs of nerves in the class pisces.

The uniform and common parts of the medulla oblongata, which are met with in all animals, are, as we have said, the corpora pyramidalia, restiformia, and olivaria; or they might be more properly termed filaments, or bands, since, in many animals, the corpora or bodies from which they are named do not exist, the medullary matter being without any appearance of elevation. These corpora, or bands, expand, as we have asserted, into the three principal component parts of the brain—the cerebrum, the cerebellum, and the tubercula quadrigemina; and it might very rationally be expected that one pair of corpora would acquire an increased development, in proportion as one or other of these organs was more voluminous. Thus the corpora pyramidalia should be developed in direct proportion to the cerebral lobes or hemispheres, and in man should predominate over every other part of the medulla oblongata, as the cerebrum does over all the rest of the brain. In fish, likewise, the olivary bodies should surpass as much the pyramidal and restiform as their tubercula quadrigemina surpass, in volume and complexity, the cerebrum and cerebellum. Such a theory, however, is untenable. We find the different portions of the medulla oblongata acquiring a greater excess of development, and becoming complicated by the addition of lobes and deposits of grey matter, without any relation to the size and complexity of the different organs of the brain which they are supposed to form. Besides the six corpora we have mentioned, there are other parts added to the medulla oblongata in the series of animals; such are the trapezoid body of the mammalia, and the lobes and striæ in the interior of the fourth ventricle in the pisces. The addition of these parts to the uniform elements of this division of the nervous system, are strictly allied to the perfection of development and function of the nerves to which it gives insertion; and as the most important in the economy, viz. the fifth, seventh, and eighth, are connected to the medulla oblongata, this organ deserves some attention at our hands. I shall consider the nerves in connexion with the parts of the system by which they are supplied; as their functions, by this mutual relation, will be better explained. The corpora pyramidalia are the continuation of

the anterior medullary bands of the spinal marrow, giving origin to the nerves of motion. In the cartilaginous and osseous fishes they form two medullary bands, visible on the whole of the inferior surface of the brain to their terminations in the cerebral lobes.

In reptiles their disposition is similar; the medullary bands still being visible on the whole under surface of the brain;—this disposition resulting from the absence of the pons varolii in these classes.

In birds the medullary cords are covered by a few transverse fibres, marking the commencement of the pons, which, in this class, is simply rudimentary.

In the mammalia the elevation of the pyramidal bodies upon the surface of the medullary bands becomes very distinct; their development increasing from man to the quadrumana, the ruminantia, and the carnivora, in whom they arrive at their maximum, or greatest degree of development*. The elevation here terminates at the border of the pons varolii, under the transverse fibres of which the medullary band is continued, by the name of crura cerebri, to terminate in the expansion of the cerebral hemispheres.

The fibres of the pyramidal bodies are continued directly forwards, in the reptilia and pisces, into the substance of the hemispheres.

In birds, the mammalia, and man, there is a mutual interlacement of the longitudinal fibres in the centre of the pyramid; the fibres of the left body going to the right, and those of the right to the left. This is more evident in man than in any inferior animal.

From this disposition of the corpora pyramidalia, it is evident that the action of the brain upon the spinal cord, or *vice versâ*, must be direct, in the two inferior classes of the pisces and reptilia. In the mammalia, aves, and man, it is inverted; wound, irritation, or injury, inflicted upon the right lobe of the cerebrum, producing affections of the opposite division of the trunk. Organic diseases of the brain have exemplified these data in a multitude of instances. We found the pyramidal bodies, or bands, to be a continuation of the motive or anterior division of the medulla spinalis; and it will consequently be expected that all the nerves inserted on the trajet, or course of this band, will be exclusively motor nerves. This we find to be the case in the third and sixth pairs, which are connected to the central mass on this part, and which has consequently been termed, by Mr. Bell, the tractus motorius. These nerves arising, or rather being inserted, solely upon the con-

* Vide Serres, Op. Cit. Pl. XIV. Fig. 266, for representations of the corpora pyramidalia in the lion.

tinuation of the anterior or motive division of the spinal cord, and having no other attachment, are found to be conductors of the property of motion singly, in distributing this property to the voluntary muscles of the eye. The third pair of nerves is attached to the *crura cerebelli*, immediately behind the *corpora albicemina* and pituitary glands; and whatever variation may be apparent in its insertion, is dependent upon the various development of parts on the base of the brain, and not in any real alteration of position in the nerve itself. We found that the *corpora pyramidalia* were at their greatest extent of development in the carnivorous tribes, and shewed the immense size to which they attained in the lion. It is also in this class that the third pair of nerves acquires its greatest degree of development, and its volume is strictly allied to the power of action in the muscles of the eye, which are instrumental in giving character to the face by the expression of the angry passions, and these are carried to their greatest excess in the carnivora: this nerve also acquires a great development in those birds of prey which are remarkable for the mobility of the iris, and the number and volume of the ciliary nerves, emanating from the reticular ganglion, to which this nerve is connected by a voluminous branch. The iris in the eagle and falcon tribe, and in many of the *leviostres*, as the common parrots, appears to possess a voluntary power of motion corresponding with the excess of development of the third pair of nerves. The sixth pair is likewise a single-functioned as well as a single-rooted nerve, and arises likewise from the *corpora pyramidalia*, posterior to the *pons varolii* in the mammalia, and in the part corresponding to it in the aves, reptilia, and pisces: this nerve, which presents nothing remarkable for our consideration, is more developed in birds and mammalia possessing the *membrana metitans*, third eyelid, or its rudiments, than in man, the size of the nerve being proportioned to the degree of action to be supplied.

These two nerves exemplify in the most satisfactory manner the office of the anterior segments of the spinal marrow, together with its terminating fibres, forming the *corpora pyramidalia* and the *crura cerebri*. This office we stated to be that of supplying the power of voluntary muscular motion, which we find to be alone possessed by the muscles of the eye. The *corpora olivaria*, or lateral enlargements of the medulla oblongata, do not make their appearance till the middle period of gestation in the mammalia, and at this period are formed of white matter only. Towards the termination of this process a mass of grey matter is deposited in the centre of the *corpus olivare*, and as this deposit increases, the elevation of the body becomes more and more apparent on

the side of the medulla oblongata. No grey matter exists in the interior of the *corpora olivaria* in the birds, reptilia, or pisces; the elevation is hardly perceptible, as the greater or less increase in the size of these bodies depends upon the quantity of grey matter deposited in their interior: the *corpora olivaria* are at their minimum of organization in the pisces, reptilia, and aves, their development proceeding in a direct ratio with regard to the cerebral hemispheres, and consequently being at their maximum in man, and decreasing gradually to the quadrumania, ruminantia, carnivora, and chiroptera, to the aves, reptilia, and pisces.

The fibres of the olivary bodies proceed forwards under the *pons varolii* when it exists, joined to the posterior and external fibres of the *corpora pyramidalia*. They contribute chiefly to the formation of the great ganglia of the brain, or the optic thalami and *corpora striata* in the mammalia, and the *tubercula quadrigemina* in birds. In all the classes the principal part of the external fibres pass forwards into the optic tubercles.

The *corpora restiformia* complete the organization of the medulla oblongata on its posterior surface, forming the lateral parietes of the fourth ventricle. They are the continuation of the posterior segments of the spinal cord, whose point of divergence marks the commencement of the restiform bodies, and forms the *calamus scriptorius*. A thin slip of medullary matter runs along the inner border of these bodies, to which Rolando and Serres have given the name of posterior pyramids: as there is nothing remarkable in their disposition, it seems to be merely multiplying names without any sufficient cause, and I am sure the brain and its appendages need no addition to their nomenclature, which is already sufficiently extensive.

The longitudinal fibres of the *corpora restiformia* are continued forwards, and join the fibres of the *pons varolii* to complete the formation of the *crura cerebelli*.

When we consider the important functions of which the medulla oblongata is the seat or centre, it will be evident that the structure and organization of this part must vary with the greater or less development of the organs by which these functions are exercised. In man and the mammalia the principal organs of the body, as the lungs, heart, stomach, diaphragm, the respiratory muscles, the senses of smell and hearing, the faculties of sensation and motion in the face, and the expression of the passions, are all in immediate connexion with the medulla oblongata by means of the fifth, seventh, and eighth pair of nerves. The cerebrum and cerebellum may be torn, wounded, and sliced, without apparent injury to the animal; but the slightest pressure or injury to the medulla oblongata is instantaneously pro-

ductive of death. It is essentially the seat of those properties which are termed vital—respiration, circulation, and digestion. The medulla spinalis presides over the properties of locomotion and the general, sensitive, or tactile function of the skin: the vital functions are connected to the medulla oblongata, together with the sensitive and motive faculties of the face, and the special senses of hearing, taste, and smell; whilst the base of the brain itself supplies the sense of vision, and the periphery or circumference of the lobes of the cerebrum and cerebellum is the seat of the intellectual faculties.

The medulla oblongata, besides possessing the three orders of parts we described, which are common to the whole series of vertebrated animals, is provided with others, which may be termed proper or peculiar to one class, order, or species: such are the lobes, &c. met with in the interior of the fourth ventricle of the pisces and reptilia; the trapezoid body of the mammalia; and the pons varolii, or tuber annulare, likewise peculiar to the mammalia.

The fourth ventricle, or ventricle of the cerebellum, is formed by the divergence of the superior extremity of the spinal marrow into the corpora testiformia, which form, together with the olivary bodies, the lateral parietes of the ventricle; the corpora pyramidalia constitute its floor or inferior boundary; and the valve of Vieussens, and the cerebellum itself, when it exists, complete the cavity superiorly. The interior of the fourth ventricle of the mammalia, besides possessing the continuation of the grey matter which we met with in the centre of the spinal marrow, is provided with two eminences or bodies of grey matter, termed the tania grisea, or grey ribbon, of the brothers Wensell: these tania grisea supply the nervous influence of the auditory nerve, and are more developed in proportion as this sense becomes more acute. The tania grisea of the brothers Wensell are the termination of the grey matter found in the interior of the spinal column in the fourth ventricle, the superior extremity of which is swelled into a species of ganglion, corresponding always with the development and perfection of function in the auditory nerve. This ganglion, if so it may be called, of grey matter terminates in the interior of the fourth ventricle, where the pons varolii joins the corpora testiformia and posterior pyramids.

In the pisces the medulla oblongata is constantly developed to a great extent between the origin or insertion of the eighth and fifth pair of nerves; the cavity of the ventricle itself is more capacious than in any other class, and is filled and almost obliterated by one or more pairs of lobes, which are in a direct ratio with the development of the fifth and par vagum nerves. In the torpedo or electric ray, these lobes of the

fourth ventricle are larger than the whole remaining portion of the brain, corresponding with the great development of the fifth pair of nerves in this part, which, besides their ordinary distribution, have to supply the electric battery with which this species is armed. This complexity in the organization of the parts contained in the fourth ventricle, corresponds with the complexity of function in the fifth and eighth pair of nerves. In the mammalia their distributions are limited to the face for the fifth pair, and the heart, lungs, and stomach for the eighth. In the pisces, in addition to these parts, the electric organs and the fins are supplied, in many species, by the fifth, as well as the organ of hearing; whilst a voluminous branch of the eighth, in addition to its usual distribution, supplies the whole surface of the skin, and renders it, as we shall afterwards notice, a general organ of respiration.

We shall now describe the development and permanent states of the trapezoid body and pons varolii in the mammalia, and afterwards particularly notice the origin and distribution of the fifth, seventh, and eighth pairs of nerves.

The trapezoid body of Tiedemann, or the commissure of the auditory nerve of Gall, is a mass of medullary matter situated on the inferior border of the pons varolii, and forming, as it were, a belt to the longitudinal fibres of the other parts of the medulla oblongata. Each band commences on the sides of the fourth ventricle at the termination of the tania grisea of the brothers Wensell, and is completed by joining its fellow of the opposite side on the median line, under the corpora pyramidalia, which pass anterior to it before they plunge into the medullary mass of the pons. It is peculiar to the mammalia, and always less visible as the pons varolii is more developed. This being at its maximum in man, the trapezoid body is consequently in him rudimentary. I do not mean to affirm that the trapezoid body is less developed in man than the other mammalia, but it is concealed by the increased development of the pons backward, this organization corresponding to the great size of the lateral lobes of the cerebellum. I am not aware that any anatomist has offered a conjecture upon the properties of the trapezoid body: Gall termed it the commissure of the seventh pair, but said nothing of its use. It is immediately connected, as you observe, with the origin of the portio dura, and may it not be connected with the respiratory function of the portio dura, in the expression of the passions? It is peculiar to the mammalia, and so are the actions of the muscles of the face in the expression of character and feeling. In the three inferior classes all the expression which the face possesses is seated in the eye, and chiefly produced by the action of the ciliary nerves upon the iris. There is no

state of the face in these animals indicative of pleasure or pain : the part during both sensations remains motionless. I need not inform you how variable are the actions of the face in the mammalia, and how widely different it is from this part in the aves, reptilia, and pisces. I am therefore led to conjecture that the trapezoid body is the organ from which the portio dura of the seventh pair acquires the perfection of action which it possesses in man and the mammalia generally.

The pons varolii, tuber annulare, or commissure of the cerebellum, results from the union of the transverse fibres of the hemispheres of the cerebellum on the inferior face of the medulla oblongata. This medullary band is to the cerebellum what the corpus callosum is to the cerebrum, the aggregate of its converging fibres uniting the two lobes. The origin and permanent disposition of this part of the brain in the fœtus and inferior animals will be found to cast much light upon the origin of the fifth and seventh pair of nerves, and to comparative anatomy alone are we indebted for any insight into the true disposition of these parts—the great development of the pons in man, concealing altogether the point where these two nerves are connected to the central mass. For the better understanding of this part of the cerebral system, we must have again recourse to its origin in the fœtus. Nothing analogous to the pons is to be found in any animal inferior to the mammalia : the aves, reptilia, and pisces are totally deprived of it. In the human fœtus also, and that of the mammalia generally, no rudiment of it is perceptible till the end of the first third of the whole period of gestation. It is first apparent in a few transverse fibres crossing the medulla oblongata, on the place the pons is subsequently to occupy, which fibres increase gradually as the fœtus advances towards its perfect evolution. In the inferior animals, as in the earlier periods of the formation of the human fœtus, the pons remains in a rudimentary state, the whole of the fibres composing it being very inconsiderable. It arrives at its maximum of development in man, and is always increased in direct ratio with the lateral lobes of the cerebellum. The connexion of the fifth pair of nerves with the parietes of the fourth ventricle is concealed by the development of the pons, since the fibres of this part envelop its insertion on all sides ; this is likewise the case with the portio dura of the seventh pair.

The fifth pair of nerves, from the numerous organs it supplies, and from the variety of functions which it fulfils, is one of the most important in the economy. Its influence upon the nutrition and integrity of the organs of the special senses in the mammalia, and the harmony of action which it essentially contributes to support in these parts, render

it particularly deserving of the appellation of the little sympathetic, or sympathetic nerve of the head. The cochlea of the ear, the appendages of the eye, the pituitary membrane of the nares, the tongue, the teeth, and muscles of the face in the mammalia, with the other organs composing the aggregate of the senses, are in immediate connexion with the medulla oblongata, or lobe of the fourth ventricle, by means of the numerous branches of this nerve. Its origin in man, and the animals more immediately resembling him, has given rise to numerous controversies among the anatomists of England, Germany, and France. It has been described as arising from the pons varolii, the crura cerebri, and various parts of the fourth ventricle ; but man being the constant subject of their researches, the difficulties attending their solution were insurmountable on account of the great volume of the pons in man. The fifth nerve in the human subject is first perceptible on its emergence from the midst of the fibres of the pons ; and in examining it in the lower animals, where the pons is rudimentary, or in the fœtus of the third or fourth month, when it is not formed, we shall discover its true point of connexion with the medulla oblongata.

Mr. Charles Bell, in his exposition of the nervous system, makes this nerve, by its functions, the first spinal nerve ; that is, it is the medium through which the properties of sensation and ordinary motion are distributed to the integuments and muscles of the face ; and according to this view, it should arise by two roots, one from the anterior and one from the posterior surface of the spinal cord or its continuations. If the medulla oblongata of a fœtus of the third month be examined before the pons varolii is formed, the eighth pair of nerves will be found to be composed of two roots or filaments of insertion, one connected to the corpus restiforme, which I shewed you was a continuation of the posterior segments of the spinal cord, and the other attached to the corpus pyramidale, which I likewise stated to be the continuation of the anterior segments of the cord. Thus we have this nerve in the mammalia formed by two roots, one from the sensitive and the other from the motive segment of the spinal marrow, conforming strictly with the functions of this nerve in the higher animals. Before their distribution to the various organs they are to supply, the branches composing the nerve are united in the cæsserian ganglion. It is probable that this ganglion or plexus may be an instrument for conferring some additional functions upon the fifth nerve, since its properties are numerous and varied, and not limited to the two functions ascribed to it by Mr. Bell, since we stated that the ganglia, on the course of the nerves, were pre-existent with regard to the brain, and not in any measure dependant

upon it for their origin or action. This observation derives support from the fact that one branch of this nerve passes directly to its termination in the masseter and pterygoid muscles without joining or becoming at all connected to the caesian ganglion, and conveys exclusively one property, which is that of motion.

In the pisces the fifth pair becomes the predominating part of their nervous system, and equals two-thirds of the volume of the entire brain. It is inserted on the side of the lobe of the fourth ventricle, upon the continuation of the segments of the medulla spinalis, the lobe and contents of the ventricle becoming more voluminous and complicated in proportion as the branches of the nerve emanating from, or attached to it, are larger and more numerous. The primary divisions of the fifth pair in man and the mammalia are three; in the pisces they are increased to six.

The first branch is the smallest; is distributed solely to the integuments covering the nares, and is productive of the ordinary properties of touch.

The second branch is distributed to the muscles of the upper jaw and the speculum.

The third branch supplies the teeth, the membrane of the mouth, and the muscles commonly furnished by the third branch of the fifth in man.

The fourth branch is more voluminous, arises by a distinct root, and is proper to the nervous organization of the pisces: it is distributed as an accessory nerve to the organ of hearing, to the first gill, to the membrane of the mouth, the teeth, and the appendices of the mouth in certain species, as the barbel.

The fifth branch is peculiar likewise to the pisces; it is distributed to the internal face of the speculum, to the membrane of the gills, to the muscles of those parts which are the mechanical agents in respiration, by opening and shutting the speculum, and forcing the water over the respiratory surface of the gill: it likewise supplies the ear.

The sixth branch is distributed to the first pair of fins, to the skin, and to the tail.

This nerve is likewise distributed to the peculiar sensitive organs situated before the mouth of the ray, and to the electric organs of the torpedo*.

In the reptilia and aves the three branches of this nerve—the ophthalmic, the superior and inferior maxillary, supply the same parts as in the mammalia.

In the mammalia the fifth nerve is, as we have seen, composed of two orders of roots, which are easily dissected in the lower animals, or in the foetus of the higher ones, the pons varolii, in both states, not being carried

to that pitch of development as to entirely conceal the connexion the nerve has with the medulla oblongata. The greater increase of development attained by the corpora olivaria and the pons, which are at their maximum in man, the less the volume of the fifth pair; and the greater the size of the fifth pair, which is at its maximum in the inferior orders, the less the development of the pons and corpus olivare. This decrease of the pons, and increase of the fifth pair in the lower animals, renders them the most eligible subjects for ascertaining its true disposition in the mammalia.

The distribution of this nerve is alike in the reptilia, aves, and mammalia.

I deem it necessary here to enumerate the parts to which the branches of the fifth pair are distributed in man and the mammalia, that its physiology may be better understood. Its minute anatomy has of course been demonstrated by the lecture on human anatomy. The ophthalmic branch is redivided in three smaller ones—1, the lachrymal; 2, the frontal; and 3, the nasal.

1. The lachrymal branch supplies the lachrymal gland, and gives filaments to the external canthus, the orbicular muscle, and the upper eyelid; a few branches pierce the molar bone, and anastomose with the deep branches of the facial nerve or portio dura of the seventh pair.

2. The frontal branch, subsequently divided into two, supplying the integuments of the forehead, and also of the nose, the superior eyelid, and the occipito frontalis muscle, anastomosing with the temporal filaments of the seventh pair.

3. The nasal branch sends or receives a communicating branch to or from the reticular ganglion; is distributed by a circuitous route to the septum narium, pituitary membrane, and integuments at the extremity of the nose; one division, the infra trochlear branch, supplying the inner canthus, upper eyelid, caruncula lachrymalis, and lachrymal sac.

The cutaneous filaments of the frontal branch, in those animals in whom the eye is merely rudimentary, and the optic nerve is wanting, are prolonged upon the integuments, forming the snout or species of trunk with which they are provided; the sensibility of the part being very much exalted, must recompense them for the imperfect vision they possess. The filaments which supply the rudimentary eye in the absence of the optic nerve are derived from the superior maxillary nerve, or second branch of the fifth. The animals in whom this disposition is apparent are—the proteus anguinus, the talpa visicolor, or mole rat of the Cape, the common mole of this country, the water shrew, the rat zemni, and the siren lacertina. We entered particularly into some points of the physiology of this branch of the fifth,

* For representations of the several branches of the fifth pair, in the class Pisces, vide Desmoulines et Magendie, op. cit. Atlas des Planches.

as compensating for the deficiency of the optic nerve, in our first lecture.

The second branch of the fifth supplies the pulp of the teeth of the upper jaw, and gives branches to the *velum pendulum palati*; and by means of the *spheno-palatine*, or Meckel's ganglion, supplies the palate itself. It also furnishes the membrane and the palate with nerves when the ganglion is wanting, as it is in the dog, the cat, the ruminantia, the rodentia, and the horse. The trunk of the nerve, emerging from the *infra orbital foramen*, supplies the integuments and muscles of the nose and face, gives an immense number of branches to the bulbs and the hairs of these parts in the quadrupeds, and anastomosing with numerous blood vessels, forms a true erectile tissue on the extremity of the nose of those animals remarkable for the fineness and delicacy of their scent.

The third branch of the fifth, or inferior maxillary, is composed of two portions, one of which does not communicate with the Casserian ganglion. The motor branch, which does not pass into the ganglion, is distributed to the pterygoid, the masseter, the buccinator, and the temporal muscles. The motor branches of this nerve are distinct from the main trunk in their origin only—in the course of its passage along the base of the skull they become blended with it.

The portion of the inferior maxillary nerve connected with the Casserian ganglion, is distributed to the pulp of the teeth of the inferior jaw, and to the substance of the tongue, under the title of the lingual or true gustatory nerve.

We shall have some further remarks to make on the anatomy of this nerve, when speaking of the special senses of hearing and sight.

The fifth pair of nerves then, in the series of vertebrated animals, furnishes branches to all the organs of the senses; and in the pisces, is distributed likewise to the fins and to the tail. In some instances it is found to be the principal agent of the function of the sense it supplies. In others it is found to be accessory, or merely appended to the trunk of a special nerve, as the optic; and where the special nerve is absent, a filament of the fifth is always the medium of communication between the sense and the sensorium. The fifth pair is, in the series of vertebrata—

1st. The nerve of sensibility to the face, and in this point of view fulfils the functions of the posterior roots of the nerves of the medulla spinalis.

2d. The nerve of smell, or the sense supplied by the first pair or olfactory—as in the cetacea.

3d. The nerve of sight—as in the mole and protens, &c.

4th. That of hearing—as in the pisces.

5th. That of taste—as in the mammalia generally.

6th. That of ordinary muscular motion.

In the first instance, where the fifth pair is not the organ of motion, when distributed with the branches of another nerve to parts provided with muscles, it is the organ of sensibility, and always to a great extent. For example, the extreme branches of this nerve, simultaneously with those of the *portio dura* and the seventh pair, supply the face and lips of the mammalia and man. The fifth pair is exclusively the conductor of the properties of sensibility; and the *portio dura*, that of the properties of motion. The function of this nerve in the face of man may be proved by induction, in examining the distribution of nerves in this part in the three inferior classes of the aves, reptilia, and pisces. These animals having no mobility in the face, and being deprived of all muscular apparatus, except that for the prehension of the mastication of aliment, are likewise deprived of the *portio dura*; the fifth pair only remaining, which in some instances is carried to an enormous extent and development, as in those fishes provided with tactile appendices to the mouth, viz. the carp and barbell. The number of the filaments of the seventh pair increases in proportion to the mass and number of muscles, and this explains why the human face is more expressive, and its expressions more variable, than that of any other animal; on the contrary, the branches of the fifth pair distributed to the face of man, are not by any means so large and numerous as in the mammalia, and particularly in the carnivorous tribes, where the sensibility of the lips is so much exalted. The higher mammalia again are not so remarkable for the size of this nerve, as those animals (the mole for instance) where the nerve becomes complementary to the non-existence of another sense, as that of vision. The sensibility of the snout and lips is here perfect, and the volume of the fifth pair at its maximum. Bell and Magendie, in dividing the trunk of the *portio dura*, have paralyzed the respiratory movements developed in the expression of the passions, on that side of the face corresponding to the divided nerve; the sensibility of the part, on the contrary, remained unaltered;—the nerve which was divided (the seventh pair) not being the conductor of sensibility, but respiratory motion.

The section of the seventh pair does not, however, destroy all the motive power of the face, those motions being prescribed which are not in any way connected with the influence of respiration. The animal still preserves the faculty of motion in the jaw, and can consequently seize and masticate his food as before. This power of motion is confined to the pterygoid, masseter, and temporal muscles, which are supplied by that branch

of the fifth pair only which arises from the continuation of the anterior segment of the medulla spinalis, furnishing the anterior branches of the spinal nerves, which are endowed solely with the properties of motion. These fibres, according to Mr. C. Bell, do not pass into the Casserian ganglion. This opinion is supported by deductions from comparative anatomy, illustrated by the pisces. In many orders of this class the sensibility of the face is reduced to its minimum, this organ being nothing more than a bony envelop or cuirass, protecting the organs and the senses. The four first branches of the fifth are reduced to so small a volume as partly to be discernible, whilst the branches supplying the muscles of the jaw and os hyoides are remarkable for their size and development. From this disappearance of the cutaneous branches of the fifth pair (in those animals where the surface of the head is a mere cuirass), and the enormous development of these branches when the skin of the face, softer, and provided with a greater quantity of blood vessels, becomes the seat of considerable deposits of erectile tissue, under different forms—as the lips of man and the mammalia, the muzzle of the carnivora and ruminantia, and the snout of many pachydermata and insectivora—we may conclude that the fifth pair is the organ of the various degrees of sensibility existing in the face, and that the only motions of which, in that part, it is productive, are those of the lower jaw in mastication; and that all the physiognomic and respiratory motions are totally independent of it, since they and the portio dura of the seventh pair are together wanting in the reptilia, pisces, and birds.

The branches of the fifth pair are solely distributed to the nares of the cetacea; no olfactory nerve is to be met with, and the fifth thus becomes the nerve of a special sense.

We demonstrated that certain animals, as the mole, proteus, and water shrew, were deprived of an optic nerve for the sense of vision, this deficiency being made up by the presence in the eye of one branch of the fifth pair. In the mammalia generally, the lingual or true gustatory nerve is a filament derived from the third branch of the fifth, ending the tongue with the sense of taste.

The section of the trunk of the fifth pair in a quadruped, where it is merely accessory to the action of the senses, is productive of a curious and important series of phenomena. The animal is immediately blinded from the division of this nerve, when the optic and third pair remain uninjured; the iris and globe of the eye are paralysed, and remain motionless; the surface of the eye is insensible to the action of the strongest stimuli, even liquid ammonia, and the secretion of tears is arrested; the cornea, at the end of eight days, becomes opaque and

ulcerates; the humours are also evacuated; the sensibility of the face is destroyed on the side where the nerve is divided; the function of the corresponding nostril, and corresponding half of the tongue, are totally destroyed.

In certain pisces we saw branches of the fifth pair distributed to the gills, thus becoming nerves of respiration; and in the batracia, this nerve supplying the muscles of the glottis, is the essence of the mechanical functions of respiration, the animal dying from asphyxia when the integrity of the nerve is destroyed.

Let us recapitulate the functions of this nerve, having its origin, as we have seen, from the medulla oblongata by two orders of roots only, strictly analogous to those of the common spinal nerves. It is a sensitive nerve, and a motor nerve in the mammalia, aves, reptilia, and pisces. It is the special nerve of vision in some animals, and the accessory nerve of this function in all. It is the special nerve of smell in the cetacea, and the accessory nerve of this sense in all. It is in all animals the special organ of taste. In some the special, and in all the accessory nerve of audition. The multiplicity of properties possessed by this nerve establishes and proves one great law in physiology, viz. that the nerves generally are not dependant for their action upon the sensorium or common centre to which they are attached, but upon the organs in which they are said to be distributed; for instance, the eye possesses in itself (as an optical instrument) all the parts necessary and appropriate to collect the rays of light, and bring them to a focus upon the retina; but the image thus produced is of no consequence to the animal; he is not in any degree aware of it unless the sensorium be made sensible through the connecting medium of a nervous agent. It is the same with the impressions of sound upon the ear, odours upon the nostrils, and sapid bodies upon the tongue. I have one remark, however, to offer upon this nerve when it is alone the nervous agent of any sense, as of hearing in the pisces, or sight in the proteus or mole. We find that the organization of this nerve is not sufficiently exalted to enable it to be the conductor of any sense, where a complicated mechanical contrivance is necessary to collect or concentrate the proximate principles of that sense, to place them in that condition necessary for their transmission to the sensorium. Where the optic nerve is supplied by the fifth pair, the eye is merely a small round tubercle, without any apparent organization. For the transmission of such imperfect images as this rudimentary apparatus can collect, a branch of the fifth pair is sufficient; but where (as in the higher animals and man) the perfect eye is manifest, a special nerve, as the optic, is wanting to

transmit the sense, and a special ganglion in the central nervous system, as the tubercula quadrigemina, to receive it. The accessory nerve, or fifth pair, is sufficient for the transmission and the perception of sound in the pisces, where the mechanical contrivance to collect it is but a simple sac, and the perception itself when received at the best but imperfect; but when, as in the mammalia, the organ is complicated with a concha, a tympanum, a vibratory chain of bones, a vestibule, and a cochlea, the sense has a special nerve for transmission, as the portio mollis of the seventh pair, and a ganglion for reception, as the tænia grisea of the brothers Wenzell. Where the capillary extremity of the nerve is distributed in a membrane, and the mere contact of odoriferous or sapid particles with the nerve is sufficient for the perception of the sense, the fifth pair is found, even when these senses are most perfect, to be equal in all respects to the transmission of the sensation to the brain; the functions of taste and smell being more general, more like modifications of the function of the skin, and consequently not requiring any complicated mechanical apparatus like those necessary for the perception of light and sound.

From the numerous and varied distributions of this nerve to organs so diversified in function, I am led to attach more importance to it than that given in the system of Mr. Bell. It is true that it is, in action, the first spinal nerve; but to how many more properties is it destined than merely those of sensation and motion? It is a nerve special or accessory to all the organs of the senses; its injury or destruction annihilates the whole sensitive system, and their perfection is immediately dependent upon the integrity of this nerve. I consider that it might be judiciously termed the sympathetic nerve of the senses, tending to preserve the union and constraint of their actions. What is the office of the ganglionic system, or that of the great sympathetic? Is it not to promote and preserve uniformity and accordance in the action of the viscera? Is not the action of the respiratory system of Mr. Bell strictly confined to establishing an uniform consent in all the organs connected with the phenomena of respiration? And why should not the senses, when their number and functions become increased and perfected, be submitted to the presiding influence of a sympathetic nerve, whose action tends to establish and keep up a consent or sympathy in their actions? That such a presiding influence is necessary, and is present in man and animals, is evident, and could be pointed out at large would our limits permit us: Bichat has sufficiently proved it, in his work on Life and Death. If there is not an uniform consent in the actions of the two optic

nerves, an imperfect image is portrayed on the retina, and a confused idea produced in the sensorium. It is the same with sound, odour, and taste. And this consent, accordance, or sympathy, is produced, I believe, by the action of the fifth pair of nerves.

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE,

DELIVERED BY DR. ELLIOTSON,

November 8, 1830.

Cases admitted—Difficulty in procuring permission to make Post-mortem Examinations—Feigned Diseases, and the Impositions practised or attempted to be practised on Medical Men.

SINCE the commencement of the present month, gentlemen, eight patients have been admitted—five men and three women. Among the women was a case of phthisis, one of epilepsy, and one of rheumatism. Among the men there was one case of palsy of the wrists from lead, one of acute inflammatory dropsy, one of colic from lead, one of chronic diarrhoea, and one of inflammation of the glands at the angle of the jaw. Since I saw you on Monday last, four patients among those admitted since the first of October have been presented—three women and one man. Of the women's cases one was chronic bronchitis, one rheumatism, and one continued fever. The case of the man was chronic rheumatism.

The case of chronic bronchitis occurred in a girl, and had existed two years—it arose from measles. You are aware that the measles frequently leave chronic inflammation of the mucous membrane of the bronchiæ, and very frequently give origin to tubercles in the lungs; in this instance the former affection was produced. By moderate diet—nutritious but not stimulating, an emetic of ipecacuanha every other morning, and a small dose of opium and ipecacuanha at evening, the girl soon got so much better that I was able to present her. The case of fever was very slight, and was treated in the usual way. The case of rheumatism among the women was also slight, and the case of the man was cured by the exhibition of mercury and the application of cold lotion to the parts which were in pain. The man had been ill twelve months, but although he was only admitted on the 7th of October I was able to present him perfectly well on the 4th of November. The rheumatism was chiefly situated in the knees and shins, and the pain was constant and so severe, that, to use his own words, it ap-

peared as "if rats were gnawing, and gimblets boring." It was attended by heat, and he was rendered worse when placed near the fire, or when covered up in bed. A common evaporating spirit wash was applied cold to the affected parts as long as they were of a morbid heat, and he took three grains of calomel and fifteen grains of compound ipecacuanha every night until his mouth was tender, and as soon as that occurred the pains immediately went away: he remained in the hospital a fortnight afterwards, but had no return of them.

There has been one death among the women in a case of apoplexy, but unfortunately no inspection took place. It is much to be regretted that in this hospital we cannot inspect patients without previously obtaining the permission of the friends. Frequently a patient dies in the hospital in whose case we have for months used the utmost efforts to cure or relieve and make an accurate diagnosis, and then no opportunity is afforded us of proving the diagnosis to be correct. I am perfectly satisfied that if the friends of patients, except in cases of accidents and sudden illness, were informed that they would not be admitted unless, in the event of death, the bodies were allowed to be inspected, they would consent to it, and it would be done as a matter of course. Under the present circumstances, in a great number of instances where permission is refused, if we offer the relatives money the request is immediately acceded to. But this is a bad custom, and I very rarely give in to it. Again, in a large number of cases, the persons who refuse, or cause the refusal, are not the immediate relations, but acquaintances; and though the former would consent, they urge them to oppose the measure, for the mere purpose of looking friendly, or of exerting influence and being busy. It frequently happens, also, that many of the patients are never once visited either by relatives or acquaintances while they are alive, but as soon as death takes place, ten or twenty persons come forward to prevent the body from being opened. Under these circumstances, if it were made a rule to admit none (except, indeed, urgent cases) but with the understanding that they should be opened if they died, it would be cheerfully consented to. I am satisfied that the opinion of the lower orders would undergo a salutary change in this respect, and that they might be brought to consider that we had not paid proper respect to the deceased, unless we had ascertained, by examination after death, the precise nature and cause of the complaint, and communicated the true state of the inside to the friends. Unfortunately, many do not distinguish between dissection and inspection—do not know that, while dissection means cutting up piece by piece, inspection is merely making a cut, looking in, and

sewing the cut up again. Whenever I die, I hope to be carefully inspected.

One patient who was admitted during the last month has been turned out of the hospital. The case I dare say every gentleman saw. The patient said he was twenty-five years of age, and had been ill only five months. His complaint, or his alleged complaint, consisted of a violent agitation of the body whenever he attempted to stand. In doing so he stood upon his toes, and moved himself up and down to such a violent degree that you would have supposed him frantic, and at last he was obliged to sit down from the violence of the motion; and then the moment he sat down his feet began to beat the ground rapidly, and after about a minute became still. I never saw a case of this description, and I had a strong suspicion from the first, as every one must have had who saw him, that his statement was a mere fudge, and that he was an impostor.

The account he gave was, that, after getting dead drunk, he found in the morning that he could not move from numbness and debility, but with great difficulty; that in about a month he was no better, and any attempt to use the lower extremities produced a violent shaking; that this happened with either extremity, or both of them; that if he attempted to stand on one leg he went up and down upon it, or if he tried to stand on both legs they both shook him up and down. He added, that when he sat still he had scarcely any power to move his legs; that they also frequently trembled, and felt cold and benumbed. He complained of having had vertigo, sometimes dimness of sight, and uneasiness in the præcordia; that he sighed deeply, and that at one time he had not power to retain his urine or his fæces. Much of this account might be true or untrue, and could not be verified. All that I could satisfy myself about was, that when he attempted to stand he raised himself upon his toes; that his body went up and down till he was obliged to sit, and then his feet beat upon the ground in a violent way. But although I satisfied myself of the motions, I had no proof that they were involuntary. I never saw any such affection before; but convulsive diseases are so various, that although I had not seen the complaint, nor read of it, I did not think it right to pronounce the man an impostor, for it is possible that a thing may happen, although it occur so rarely as never to have been seen by me.

Of course I began to treat him as though it were a real convulsive disease, intending to make my observations as I proceeded. I ordered him first, what we know is often beneficial in these diseases, subcarbonate of iron, half an ounce every six hours, a cold shower-bath every day, and electricity to the loins and lower extremities every day. He

certainly very soon began to act like an impostor. The first complaint was that he felt so exceedingly weak that he could not live unless he had some porter : and some porter I allowed him—a pint a-day. The next thing was that he disliked the shower-bath—it made him very ill the rest of the day, and he begged that it might be discontinued : and I discontinued it. The next thing was, that the electricity (for I gave it him in shocks) caused such dreadful suffering that he could not bear it, and it was impossible for him to submit to it every day ; accordingly, he had shocks one day and sparks another. But still I could not comfort him. He could not eat the meat of the house ; he could not bear boiled meat. I then said that he might have it fried or broiled. However, the next complaint was that he could not eat broiled meat if it had been boiled first. I knew that the middle of the joints of meat were pretty underdone, and would bear broiling, and so had ordered these parts to be broiled for him. He begged that he might have mutton-chops expressly for himself : mutton-chops I allowed him, instead of the meat which others ate. Yet this would not do ; he had no appetite ; his tongue, however, was very clean, and I therefore gave him something to create an appetite for his mutton-chops—compound infusion of gentian ; but even now I could not content him. He wanted to go out for two days ; he had been here for a fortnight ; and I suppose if he or any other man were in pretty good health, he would feel desirous to go out and indulge a little in the amusements of other people. I allowed him to go out for two days ; he alleged, however, a very plausible reason for this, stating that he had a pension paid every three months, and that it was necessary for him to shew himself, otherwise he would lose it, or at least if he only shewed himself at the end of six months he would lose that which he ought to have had at the end of three. I found, however, that the pension was to be received in the city, and I thought half a day quite sufficient. He replied that it would cost him half a guinea to get a coach ; that he must go to some friend to borrow the money : and then he must go to the cook of the vessel in which he had formerly been in order that he might accompany him to testify that he was the person to whom the pension had been allowed, and so he was to go out for two days. This, however, did not content him, for he had always been dissatisfied with the sister, and with every body in the ward ; he said the sister was too sharp, and he began to accuse some one in the ward of stealing eighteen pence. Under all these circumstances, it was found necessary, during my absence, to turn him out. I visited him last Tuesday, and on Wednesday the steward very properly turned him out :

the eighteen pence, which he accused one of the nurses with stealing, was found.

All these were strong presumptions that he was an impostor ; for if he had had such a complaint as incapacitated him from moving from even one part of a room to another without the help of others, unless he moved upon his breech, he would have submitted to such a trifling inconvenience as a cold shower-bath in the morning, or electricity once a-day : he would have been contented with his diet without porter, and have been very well pleased, having such a clean tongue as he had, with his diet, without requiring mutton-chops. All this looks very suspicious. I have since understood that he had been in another hospital, and turned out on account of his discontented and troublesome behaviour, and had given a different account there of the origin and duration of his disease. After he left this hospital I hear that he went to another the very same day, where he now is. What is very singular, and adds considerably to my suspicion is, that under the electricity, the shower-bath, and the addition of the subcarbonate of iron, he mended, so that from having been at first thrown into a violent agitation on standing, he could with the assistance of another man walk about the ward, merely going gently up and down as he walked ; but notwithstanding his improvement, witnessed by me more and more up to the Tuesday, I am informed, when he presented himself at another hospital on the Wednesday, he went up and down with the same violence which he did when he first came into St. Thomas's. Now as he had been progressively mending from his admission on the 20th of October up to last Tuesday, the 2d of November, it is not at all probable that a difference of twenty-four hours would, without any obvious case, have brought him back to his original condition. If, however, he be an impostor, there certainly is an obvious reason for his appearing so much worse, because it was necessary, in order to procure admission, and create a belief that his affliction was real, that he should appear as bad as possible. That he pretended to improve was, I have no doubt, that he might have less and less of the electric shocks ; and indeed he invariably grumbled and tormented the gentleman who electrified him, the whole period of its administration. Besides, when he first came in, I endeavoured to ascertain whether the disease was real or feigned. I knew that if it were involuntary motion, he could not continue it very long, and I had him supported between two patients, and made to stand ; he, of course, moved with the greatest violence up and down, but was soon fatigued, and wished to sit. I ordered the men still to support him, that the motion might con-

tinued: he went on more and more violently, till he looked as if he were tormented by fiends; his eyes started, he looked in the most violent agitation, and got out of breath, and implored me to let him sit down. It was very plain that either the convulsions were involuntary, and had become very violent by his continuing to stand, or that the effort, if voluntary, was too great to be continued long, and he made all this fuss that he might be allowed to take rest. I confess I adopted the latter conclusion, because the beating with his feet after he sat down always ceased of itself, though his feet still remained on the ground. The motion up and down, if involuntary, would therefore probably have ceased spontaneously after a little while, though he had still continued standing. If they were voluntary, it would be impossible for him, of course, to continue them very long. It was very suspicious that he should select a motion which might be executed by volition, for any one who chose could do exactly as he did; and very suspicious that he should select a motion not to occur constantly or long, but only in a certain posture, so that he need not be much troubled with it, and that a posture continually necessary for a seafaring man, so that he was liberated from it the moment he sat down, and for a few moments after he sat down it was a different motion, performed by quite another set of muscles, all fresh for action, and then he became quite like other people. There was, moreover, no relation between the two motions; although there was a good reason for having two kinds of motion, if the exertion were voluntary. There is another circumstance that looked suspicious. He was thoroughly electrified the day he came in, and I stood by, and shock after shock went through the spine. He was then raised from the chair, and he both stood and walked far better than at first, which was very likely to have arisen from his desire not to have any further electricity that morning. I also tried him in another way. When he was in bed I told him to press the soles of his feet against a gentleman's thighs, and desired both of them to make pressure, and yet no convulsion arose. Now I should suppose if the affection had been real, the pressure and exertion ought to have induced some degree of the same convulsions that the pressure and exertion of standing or walking produced; but nothing of the kind occurred—no effect ensued. Still, however, I did not think myself at liberty to pronounce him an impostor, nor do I now; but I confess I had a strong suspicion all along, and now it is tenfold greater than it was before. I do not accuse him of being an impostor, but I have a right to give a medical opinion upon the case, and that opinion is, that in all probability the whole is a fudge. It is also to be remembered that he

has been at sea, and that sailors and soldiers excel all others in tricks of this kind: they practise them continually, and have brought them to great perfection.

Upon inquiring among my friends I heard of one case, since he came into the hospital, where the muscles of the ribs were thrown into violent agitation, and after a time disease of the spine corresponding with the part affected shewed itself; therefore the occurrence of such a case is perhaps possible. But when all the circumstances that I have now detailed are taken into account, and when we reflect that he was continually laughing and merry after he had secured his porter and mutton-chops, and escaped the cold bath altogether, and the electric shocks every other day, I think there can be little doubt upon the subject.

This case leads me to make a few remarks upon the impositions which are frequently attempted upon us.

Writers on forensic medicine divide impositions into three kinds:—pretended diseases—*morbi simulati*; into diseases which really exist, but where health is pretended—*morbi dissimulati*; and diseases which are falsely imputed to others—*morbi imputati*.

Now people frequently pretend disease which does not exist, for the purpose of avoiding punishment. For example, if a person be supposed insane, he is not capitally punished for a crime which he has committed; indeed if a woman be pregnant (pregnancy, however, is not a disease—a pathological state, but a physiological state, and therefore the word *morbi* is an improper term for the whole of these things,) she is not executed,—the punishment is delayed till the pregnancy is over. Soldiers and sailors frequently pretend disease merely to avoid the duties of their station, and others pretend it in order that they may be dismissed the service. Diseases are *dissembled*—health is pretended, by some persons, that they may not lose their situations, and by others that they may not have the disgrace and disadvantages which would attach to their particular condition. Single women, who are pregnant, will sometimes dissemble the impregnated state, that their characters may not suffer. Again, diseases are *imputed* to people by others that they may get possession of the property of the persons whom they pretend to be so diseased, or that they may get the management of them in some way or other, and not unfrequently merely out of spite, from a desire to disgrace another.

Now these stratagems have been adopted from the most ancient times; but I will speak only of the *morbi simulati*, for the *morbi dissimulati* and *morbi imputati* I shall not have time to consider, and there is far less difficulty in ascertaining the *morbi dissimulati*—the existence of disease when

health is pretended, than when health is feigned. For if a person have a disease, it is very difficult for him to conceal it—if we are ill, it is not so easy a matter to appear well. Again, with regard to imputed diseases, the alleged disease does not exist, and the individual himself is practising no deceit; the disease is merely imputed to him by others, and you have as full an opportunity of judging of his real state as they; for no person will think of imputing a disease which gives no external symptoms—of imputing chronic rheumatic pains to another, because it is an affliction which they may not be able to prove, is frequently characterized by pain only, attended by no swelling, heat, or any thing sensible to others. But pretended diseases—*morbi simulati*, are very numerous, and I may add that to feign disease is an exceedingly ancient deceit. You recollect that Ulysses pretended to be mad, in order to avoid going to the Trojan war. David, too, pretended to be mad, or rather to be imbecile, when he was afraid of Achish, the king of Gath, to whose court he had escaped from Saul; and hence you read in 1st Samuel, xvi. 13, that “he changed his behaviour before them, and feigned himself mad in their hands, and scrambled on the doors of the gate, and let his spittle fall down upon his beard.”

I have had far less experience in these things than gentlemen who practise in the navy and army; and it is quite wonderful to read what is borne—what severity of punishment is undergone, by sailors and soldiers, to avoid duty, and to obtain their discharge from the service and get pensions. They will bear the most severe medical treatment—starving, blistering, the application of caustic; they will bear to be confined by themselves; they will keep up inflammation of the eyes by cantharides or sulphate of copper; day after day subjecting themselves to the greatest pain, and exposing themselves to the greatest hardships, till they at last procure their dismissal, and then they will sometimes confess the cheat. No one could have the least idea that human nature would be capable of practising such deceit, and of undergoing such suffering for the purpose of carrying on that deceit. You will find very good information on the subject in a paper on feigned diseases, by Dr. Cheyne, in the fourth volume of the Dublin Hospital Reports, and in Mr. C. Hutchison's Practical Observations on Surgery, the former gentleman relating what he observed in the army, and the latter what he observed in the navy; and in Dr. Hennen's Military Surgery the subject is likewise well treated.

Dr. Cheyne says, “I never saw a more humiliating picture of depravity or perversion of reason, call it what we may, than I have witnessed in a ward filled with soldiers labouring under ophthalmia; most of the

cases, as I learned from the surgeon in attendance, being factitious. The methods by which inflammation of the eye is produced and maintained, have not all been brought to light, but quick lime, infusion of tobacco, the gonorrhœal discharge, cantharides ointment, nitrate of silver, blue stone, and other metallic salts, are probably among the most common irritants employed. Inflammation thus caused is most painful, and is kept up under every privation which can make life miserable: locked up in a dark ward, and permitted to have intercourse only with the officers of the hospital, nurses, and orderlies—confined to diet which, from the absence of every stimulating material, is most disrelishing—suffering under painful external applications, and nauseating internal medicines—phlebotomized and leeches till their complexions are bloodless, their pulse hæmorrhagic, and the frightful train of nervous symptoms, which excessive bloodletting produces, is established in the system. All these evils, in many cases, have the effect but to confirm the soldier in his determination to destroy one or both of his eyes, that he may be dismissed from the service with the chance of a small pension. Wonderful, indeed, is the obstinacy which some malingerers (the name given to these impostors) evince. Night and day they will remain with the endurance of a fakir in a position the most irksome. For weeks and months many men have, with surprising resolution, sat and walked with their body bent double. Some have continued to irritate sores in the leg till their case became so bad as to require amputation of the limb, and many instances have occurred in naval and military hospitals of factitious complaints ending fatally.” It is thought that methods of deception have been reduced to a system, and preserved in many regiments, and handed down, that those who think proper may try them; and a kind of freemasonry exists, which, preventing the exemplary from informing of the worthless, renders it often very difficult to detect the method of deceit.

One of the diseases which is very commonly pretended is fever. Persons will take spirits, or stimulants of some kind, to excite the pulse, to heat the skin and parch the mouth; but in these cases, unless there be intoxication, or an approach to it, there is not that heaviness and distress of countenance which is seen in fever. You may frequently smell what they have taken from their breath, and if you confine them in a room by themselves, taking care to have them stripped first, so that they shall not have an opportunity of applying stimuli again, all the irritation must subside. It is necessary, however, to know, that sometimes, for the purpose of keeping up this irritation, persons will put a clove of garlic up the rectum; but as it is right to treat the case as you would

if fever was real, — by clearing out the bowels, this cannot long occasion difficulty. So with respect to any feigned disease which, to be kept up, requires continual irritation, whether ophthalmia or any sore, — if the person is kept confined, so that he cannot obtain access to the stimulants that are necessary, it must speedily cease. The complete prevention of access to means of deceit is the great means of detecting and removing a large class of feigned diseases. Tobacco and digitalis are said sometimes to have been taken to produce the opposite effect on the pulse — to depress it.

Deafness and dumbness have frequently been counterfeited by persons in places where they were unknown. A young man in France, to evade the proscription, pretended to be deaf and dumb, and for four years he baffled all attempts to discover his artifice. In France, in Germany, in Switzerland, in Spain, and in Italy, he wished to appear that he was a different person to what he was, and that, like young Telemachus, he was in search of his father. He pretended to have been instructed in the Abbé Secard's establishment; but, when confronted with some of the Abbé's pupils, he proved to be ignorant of the signs that were taught in that school, and for fear of being brought before a cook, from whom he had learnt to make pastry, he opened a book and read aloud. Consistent as he had been during these four years, he failed in one point — in writing he substituted, through ignorance (for he had been indifferently educated) *g* for *c*, making it probable that at one time he had learnt that the sounds of these letters were much alike in some cases, and this he was not likely to have known but by his ears. The Abbé de l'Épée, and a whole committee, were once deceived by an impostor, who pretended to be deaf and dumb. In one instance a man pretended that he was born deaf and dumb, for the purpose of obtaining his discharge from the French army; but the examining physician, Dr. Fodere, going behind him, said, you shall not persuade me that you are deaf, and if you will disclose the truth, I will procure you your discharge. Well then, said the poor deserter, to the great surprise of all, "I am not deaf." A loud noise, suddenly made in the ears of such persons, will sometimes agitate them in spite of all they can do, and their capability of hearing has been discovered. Sometimes the discovery has been made by talking in their hearing of adopting violent measures for their recovery; by saying that the only remedy for their complaint would be the application of red hot irons. This has frequently produced agitation of the countenance, or quickness of the pulse, which shewed that the conversation was overheard. Stratagem, therefore, is another mode of discovering whether diseases are feigned.

A very fine case of imposition was practised in this country a few years ago by a Miss Macavoy, at Liverpool. She pretended that she could not see with her eyes, but with her fingers; and some persons of education were convinced that she was not an impostor, and a quarto book was written to substantiate this opinion. Goggles were put on her eyes, but it was very easy for her to see in spite of them, by holding her head in different directions, so that the light might get under the edges. The satisfactory proof would have been to put her head in a band box, and bring it down close around her neck, so that it would be impossible for her to see the light from any part. It is very difficult so to place any thing over the eyes as totally to exclude the light; and it is an acknowledged fact, that she was obliged to hold her head in different directions when the goggles were placed upon her eyes before she could see any object; but certainly there would have been no occasion for this if she could have seen with her fingers. The whole thing, I must say, appears to me to have been very gross; for she declared, that, by touching a transparent medium, she saw objects through it larger if it was convex, and smaller if concave. Now if she had seen with her fingers, it would have been impossible to produce this effect, because you know that the focus of a lens is not at the surface of the glass which she touched, but at some distance; and therefore if she could see with her fingers, she ought to have done so at the focal distance. No experiment was made to ascertain whether the point she touched of the lens was in a line with the object, and whether an opaque substance interposed in this line prevented her power. An accurate investigation, with the view of detecting any incompatibility or impossibility, or any deviation from the usual character of the disease pretended, is a third mode of ascertaining the existence of deception.

Short sightedness and long sightedness have frequently been feigned that persons might not go to service, and it may be detected by causing them to look through glasses which are calculated to remedy or to increase the difficulty without the effect being produced which must ensue, if their complaint were real.

Amaurosis is sometimes pretended, and it may be difficult to detect it, because in amaurosis the structure of the eye is frequently entire; the pupil of the eye in amaurosis, though not always, sometimes does contract when the light is admitted; but if the pupil were always insensible, or the iris sluggish, you would then always detect the disease, at least by cutting off the patient from access to belladonna, which you well know, if smeared over the orbit, dilates the pupils, and renders the iris motionless for a time. But blisters, and caustics, and measures

of that kind, are often very proper in amaurosis, and therefore very proper in cases of feigned amaurosis, and are far more likely to cure it than the real disease. Electric shocks are highly proper in many cases of palsy, rheumatism, and convulsions; and Dr. Cheyne has found them to cure many feigned instances of these diseases. My patient was rapidly getting well under electric shocks, and may be soon cured probably by them in the hospital in which he is at present.

A writer on forensic medicine, Mahon, tells us of a young man who practised feigned amaurosis so well for a length of time that he frustrated all attempts to detect the fraud. He was taken towards the brink of a river, and told to walk on, and he positively did walk straight on, and tumble into the river. On a promise, however, being made him of his discharge, he acknowledged the deception, and took up a book and read.

Palpitation has sometimes been feigned. Dr. Hennen, in his military surgery, mentions an instance of a soldier who succeeded in making it appear that he had great palpitation; but when he was compelled to throw his head back, so that he could not lessen the cavity of the chest, the palpitation became improved. It appears that he did it by lessening the chest, so that the front of the chest was brought close to the heart, and this organ was felt beating against the parietes; but when he was so placed that he could not contract his chest, the palpitation was found to be exceedingly slight. Mr. Hutchinson says that white hellebore is sometimes employed by sailors to excite palpitation.

As to feigning jaundice, that is easily discovered, because persons cannot colour the sclerotica; and if the skin were coloured by any external substance, a good washing would of course take it all off; and I believe they generally forget to whiten the faces, and to make the urine like porter; or if they do not forget this, they neglect to make it yellow, so that if you turn the utensil into which it is received on one side, you may observe the edge of the fluid to be yellow.

It is said that the paleness of general debility and exhaustion has been imitated by the fumes of sulphur brought in contact with the face; but here deception would be easily discovered.

Hæmorrhage has been often imitated. Bullock's blood has been employed to give the appearance of discharge of blood from the lungs, the stomach, the rectum, the urethra, and the vagina. I have known young women who came to the hospital, suck their gums, or prick and suck their fingers, and then shew a quantity of blood; I had a case last year in the hospital where this deception was practised. Sometimes they pretend to vomit blood, and more than can come from the gums, and contrive this by drinking a

quantity of bullock's blood; but this may be discovered by confining them, and so with respect to the rectum, into which they have been said to inject it, that they may be seen to discharge it.

Respecting bloody urine, this has been imitated in the same way, and by taking certain things which render the urine of a red colour. The Indian fig or prickly pear, and some red roots, when taken by the mouth, are said to have the effect of rendering the urine red. But although the urine has this colour, you can easily discover that the redness is not from blood, because there is no coagulum, no red lumps, no flocculi, nor does the urine when evaporated give a sediment of dried blood. I recollect a woman shewing a number of small substances which she said passed with her urine, and gave her great pain: they were found to be solely carbonate of lime, which very rarely composes urinary calculi, but constitutes the bones of fish. They were shewn to Dr. Wollaston, who, on looking at them through a lens, discovered that each had an aperture in the centre, and clearly made out that they were the vertebrae of sprats.

I believe that among the most frequently pretended diseases in civil practice are the convulsive and spasmodic. Epilepsy is the most frequently chosen for this deception. It is said that persons produce a foam at the mouth by means of a little soap, and some go so far in these enlightened times as to produce dilatation of the pupil of the eye by the extract of belladonna. Generally, we are told, you may discover when epilepsy is feigned by observing that the pupil is not dilated, and by producing violent pain, so that they are obliged to show symptoms of sensibility. Many cases of feigned epilepsy may be detected by bringing before them a red hot iron, and if this fails, by beginning to apply it; but where that is not thought right you may generally produce a sufficient effect upon the patient by passing your thumb nail under one of his nails, when such violent pain is produced that he will probably cry out, withdraw his hand, and come to himself. Dropping a little spirit into the eye has answered. As to the soap, that may generally be detected by the smell. You will also observe that when persons pretend epilepsy they do not fall in a dangerous place—they are not addicted to falling into the fire or into the water, nor are they particularly fond of falling against the corners of buildings, but they usually fall on some safe place, where they can take no hurt; accordingly an impostor has been discovered by placing him in the fit on a high table, near the edge.

But besides this epilepsy they will pretend to have other convulsions, and it may be very difficult to discover the real nature of the case, because there is such an end-

less variety of convulsive diseases. There are convulsive diseases so singular that you would be unable to decide at once, and to say here is a thing that I never saw or read of, and which is a deception. It may never have been heard of by us, and yet the inference that it never occurs may be false. It was on this account that I hesitated, although I had not seen such a case as occurred in the man, in pronouncing it a deception. Deceptions with regard to convulsive affections were more common formerly than now. Persons pretended that they had the holy ghost in them, and others that they were possessed by a devil, or bewitched, and that such and such individuals were the cause of it: the former wishing to prove themselves holy—the others wishing to occasion mischief to their neighbours. In former days some medical men lent as much attention to these things as the public at large. Senert allows that the devil will cause insanity, and make the person speak a strange language, and that the reason why atrabilious people are liable to melancholy is simply because the devil is fond of wallowing in black bile, and therefore enters them for a treat, and that if the physician purges it away, and cures the complaint, the cure is effected, not by the removal of a bodily disease, but by purging away that into which the devil had gone for his delight—the *batneum Diaboli*, as it was called—so that the devil leaves the patient who is thus melancholy no longer. Some physicians, says old Avicenna, have seen what the devil can do. Cornelius Gemma, a physician of the sixteenth century, writes that a cooper's daughter, named Catherine Giralda, had such strange passions and convulsions that three men sometimes could not hold her. She discharged a live eel, a foot and a half long, which he saw and touched, (but he unluckily did not see it come forth) and the eel afterwards vanished; she vomited some twenty-four pounds of fulsome stuff of all colours, twice a day, for 14 days, and afterwards balls of hair, pieces of wood, pigeons' dung, coals, stones with inscriptions, parchment, goose dung, coals, pieces of glass, &c.: *et hoc*," says this writer, "*cum horrore vidi*:" he saw them, no doubt, but not in transitu. The doctors attributed all to the devil, and gave her over to the clergy. Marcellus Donatus relates a similar case, and supposes it happened, *certe non alio quam demonis astutia et dolo*. Physicians have generally, however, been among the most enlightened of mankind, and Voltaire says that he should advise the devil always to address himself to the parsons, and not to doctors, if he hopes to flourish. "*Je conseille au diable de s'adresser toujours aux facultés de théologie, et jamais aux facultés de la médecine.*" In Plenck's Elements of Forensic Medicine, published in 1781, you

will find demoniacal possessions regularly arranged like other diseases, so that you have *demonia vera*, *demonia simulata*, *demonia dissimulata*, *demonia imputata*, and *demonia imaginaria*. The *demonia vera* is particularly distinguished by the repugnance of the patient to holy water, upon the approach of which, even unseen, he is sure to become outrageous. Though enumerated by Plenck, he however plainly believes nothing about it, and cunningly refers us for the dissipation of our doubts to the clergy,—*an demon potestatem habeat, &c., a theologis quæri debet*.

You must consider me to have made but a few cursory observations on this subject, as it is too extensive for a single lecture, and I must refer you to the works which I have already mentioned, and those upon forensic medicine; in them you will find cases without end. There was a girl in Strasburgh who grew as large in the body as Sterne's stranger did in the nose, and a suspicion arose of her being pregnant. The time, however, at which pregnancy would have ceased, passed away, and still her body was as large as formerly; in short, she continued to increase for thirty-nine years, and it rendered her so much an object of compassion that all the charitably disposed ladies in the neighbourhood were moved towards her, and their sympathy was so powerfully excited that she was well supported all her life without work. She resolutely persisted in not allowing a medical man to go near her. After 39 years she died, and the disease was found, not in her body, which was of a proper size, but in her wardrobe, where a large pad, nineteen pounds in weight, was discovered, which had both given her a goodly bulk and made her waddle in walking, as though she had a heavy tumor of the abdomen.

A trooper of the 12th pretended that he had lost the use of his right arm, and after resisting severe hospital discipline for a great length of time, succeeded in procuring his discharge; and when he was fairly seated on the top of the coach, waved his *paralytic* arm in triumph, and cheered at his success. A militia soldier pretended he had lost the use of his lower extremities, and was discharged. He afterwards caused himself, on a field day, to be taken in a cart in front of the regiment, which was drawn up in a line, had the cart driven under a tree, upon which he hung his crutches, leapt out of the cart, sprang three times from the ground, turned his back to the regiment, and having slapt his breech, scampered off at full speed.

Now although we may be so imposed upon, there is a caution which I am very anxious to impress upon you. It is possible for the disease, which you suppose to be pretended, really to exist; and if you were to pronounce an opinion that the case was one of mere deception, certainly the consequences must be exceedingly painful to your feelings. I

confess that I would rather be deceived a thousand times than say once in my life that a person was an impostor when he was not. It was on this account that, although I have such strong suspicion of the man to whose case I have alluded, I would not say he was an impostor, and did not adopt any measures which would not be calculated to remove his complaint, if such a complaint existed. I certainly should not like to be deceived, but you must remember, that if you make one mistake you do a serious injury to a fellow creature. It may hurt our pride to be deceived and overmatched; but though your pride be not hurt, although you are not overmatched by another, when you pronounce a man an impostor who is not, you must have, in this case, to reflect that you had been deceived by yourself. It is better to be deceived by a thousand persons, and injure no one, than to injure one individual. Your pride may not suffer in the latter instance, but the error of judgment is just as great as if you had permitted another person to deceive you.

In 1804 or 1805 a soldier complained of great uneasiness in the loins, was treated as a malingeringer, and sent to punishment drill, at which he was kept till the tumor of a lumbar abscess appeared upon his back, of which the poor fellow died. Fodéré confesses that for fifteen years he refused his certificate to a young soldier, who complained of excessive pains, sometimes in his head, at others in his chest, and at length died, when no disease was discovered; so that Fodéré concluded his complaints had been real, and he had been exhausted by mere pain. "From that time," says this writer, "I have often preferred being indulgent to running the risk of being unjust again in a single instance." Had this happened to me, I should never have been perfectly happy again.

With respect to all these deceptions, the moment you have any suspicion I should recommend you to have the patient watched. If it be an affection which can only be continued, as you may imagine, by the application of particular means from time to time, then the patient ought to be secluded, and prevented access to any thing that can keep up the state. Supposing it is a disease in which no stimuli, nor any particular substance is required to keep it up, then it is best to have recourse to stratagem of the various kinds which I have already mentioned—by threatening punishment in his ears, if he pretend to be deaf; or by writing it down before him, if he pretend to be blind; and by noticing the effect on his pulse. In all cases it is necessary to observe if there is any inconsistency or impossibility in the description, or a deficiency in the detail of symptoms. I would not have recourse to any violent measures, or any severity, until suspicion grew very strong; the measures that we have recourse to, to cure many diseases, are suffi-

ciently painful, and may with propriety be adopted with the view of curing the disease, and be quite as efficacious, if the disease be one altogether feigned. Again, when every thing fails to disclose the deception, and still there is every reason to conclude that it is a pretence, it is best to take the patient on one side, as Dr. Cheyne suggests, and put him upon his honour, and promise him forgiveness if he will acknowledge the cheat. When you consider that, in a great number of cases, individuals really have a powerful motive for the deceit, that is to say, it is to avoid something, some very hard service or duty, a punishment, or to get support when they are starving, and the disease may really exist in some degree and is only pretended to be worse than it really is, there is still more reason for being cautious. I know that many feign diseases merely from idleness, and many of them are most dissolute persons, altogether devoid of principle, and I would advise you always to be active in your investigation. But when you consider the possibility there is of your being deceived, or that, if you are not deceived but are quite right, that the person may be in such trying circumstances of life that he is to be pitied, I must repeat that I should prefer being deceived in a thousand cases than run the risk of pronouncing one really diseased person healthy.

It is to be remembered, likewise, that although patients often deceive us, practitioners are sometimes as great deceivers as patients. If there are deceiving patients, there are deceiving doctors; and, to say nothing of those regular practitioners who disgrace the great body of us by their quackish habits, that notwithstanding the laws of the Royal College of Physicians, the laws of the Royal College of Surgeons, and the laws of the Apothecaries' Company, quacks exist in shoals, and can flourish in this metropolis under the walls of these three authorised corporations, and set all three at defiance: for to suppose any one of the three would not instantly suppress quacks and impostors, had it the power, is to accuse it of a neglect of a solemn duty. Nay, far more than this, a quack may not only gain £12,000 a year by his tricks, in spite of these three bodies, but is allowed to kill the patients who fall into his hands at the rate of £250 a head.

The woman, whose case was described by Dr. Elliotson, in his lecture published in our No. for Nov. 6, had lain-in, it appears, not seven, but only rather more than three weeks.

A CASE
OF
EXTIRPATION OF AN INVERTED
UTERUS,

With Remarks.

By JOHN ADDINGTON SYMONDS, M.D.

(Edin.) Oxford &c.

MRS. TIDMARSH, aged 18, was about two years and a half ago delivered in the country of a living child, at the full period of gestation. She reported that the labour was lingering, and that the placenta, which had been detained a considerable time, was removed with great violence. She reported also that an attack of fever came on a day or two after her delivery, which from her description was probably of the irritative or typhoid type, and from which she recovered very slowly. More or less uterine hæmorrhage had continued for the space of nine months, when she was removed to Oxford. Mrs. T. was then labouring under great debility. Her complexion was blanched, puffy, and opaque; the discharge from the vagina was sanguineous, for the most part liquid, but occasionally mixed with coagula. She had now and then been troubled with bearing-down sensations, but had not suffered pain in any remarkable degree. As there was no abatement of the hæmorrhage after a short course of tonics with astringent injections, a manual examination was proposed, and acceded to. The result of this was the discovery of a tumor in the vagina, about two inches and a half in length, and an inch and a quarter in the transverse diameter, broader at its inferior extremity, and slightly tapering towards the point of its attachment. Its texture was firm and incompressible between the fingers; its surface smooth, equable, and insensible when pressed, or irritated by the points of the fingers. The os uteri embraced its upper part, and was without its usual tuberculated feel. The origin of the tumor was evidently above the mouth of the womb, but at what distance it was difficult to determine. The finger was stopped in its progress at the pubic and lateral parts, but proceeded higher up posteriorly. My father, who has had considerable experience as an accoucheur, and who was

one of those who examined the tumor, affirmed that the *cul de sac* was entire towards the sacrum, as well as in the other directions. The question was now, whether the tumor was an inverted uterus or a polypus. In favour of the supposition that the latter was its real nature were adduced its pyriform shape, its insensibility, the great degree of hæmorrhage which had taken place, and the doubt which some entertained of there being any attachment of the neck to the posterior part of the uterus. On the other hand, the probability of its being a case of inversion was founded on the history of the labour, the equable surface of the tumor, its incompressibility, the *cul de sac* at its superior extremity, and on the size of the tumor having been found in repeated examinations, to have been stationary during several weeks. The opinions of the medical men were at variance; I inclined myself, though not without some degree of hesitation, and my father still more decidedly, to the latter supposition.

While the uncertainty was such, the mode of treatment was likewise in suspense. But in the midst of our doubts and deliberations, the patient improved somewhat in health and strength, and returned to the country. Nothing more was heard of her till the latter end of last October, when she again visited Oxford. She stated that there had been very little alteration in the condition of her health during her absence, the discharge from the vagina having persevered more or less, sometimes changing from the sanguineous character to that of a whitish secretion of various consistence, and sometimes omitting the space of a fortnight, but never observing any regular periodicity. Her general appearance was much the same, excepting a little more fullness or plumpness of habit, while the countenance wore the same exsanguine aspect. The appetite and the alvine function had nothing remarkable. The pulse was quick, and, as might be expected, weak and irritable. We found by examination of the vagina that the tumor was decidedly lower down, and, which was important, the os tincæ also. The texture of the tumor gave the same impression to the touch, and with regard to bulk it was a little shorter, but thicker. The lips of the os uteri were thin, and the point of the finger was

* North of England Medical and Surgical Journal.

prevented from penetrating higher than a quarter of an inch, by the now unequivocal continuity between the circumference of the neck of the tumor and the inner surface of the mouth of the womb. Those who examined, namely, Mr. Webb, my father, and myself, coincided in the belief that the poor woman was suffering under inversion of the uterus.

After taking all the circumstances into deep consideration, and after repeatedly assuring the patient and her friends of the danger of the operation, it was determined to effect the removal of the tumor by ligature.

Accordingly, after the rectum had been well cleared out by an enema, Mr. Webb, in the presence of my father, Mr. Price, and myself, succeeded in surrounding the neck of the tumor, within the os tincæ, with a piece of strong whip-cord, by means of Dr. Gooch's very convenient instrument. On drawing the ligature tight, we were agreeably surprised that the patient uttered no expression of pain; on being questioned, she said that she felt "something tight," but no pain. A kind of nervous thrill came on, and the pulse was very hurried, apparently from mental agitation, as she had entertained great apprehension respecting the suffering which the operation would produce. A large dose of Battley's preparation of opium was administered, and after having secured the canula to the thigh, for the sake of obvious precaution, we withdrew much better pleased than our anticipations had led us to expect. Mr. Webb informed me the next day that he had been called to Mrs. Tidmarsh a few hours after we left, in consequence of acute pain having been felt in the neighbourhood of the tumor. It had been agreed to treat her as much as possible in the same manner as the case related by Dr. Gooch, and opium was therefore given, which, together with fomentations, had the effect of quieting the pain. She was also ordered to take salines every four or five hours. I visited her, and was glad to find her free from suffering. There was scarcely any tenderness on pressure at the lower part of the abdomen. The pulse was frequent and irritable, the countenance tolerably placid, and the tongue clean and moist. On the third day the ligature was tightened without the production of pain at the time, though it

came on, as before, two or three hours afterwards, and was again subdued by opium. The discharge was dreadfully foetid, though the vagina was continually washed out with injections. The ligature was tightened every other day, and the general health continued much the same. The spirits were cheerful and the appetite good. She was allowed to take wine when oppressed by faintness, which indeed frequently came over her. On the thirteenth day the ligature when tightened broke, but another was immediately applied. On the fifteenth it came away, and Mr. Webb extracted the tumor from the vagina with his fingers.

An inspection of the tumor confirmed the opinion which we had formed of its structure. At the narrow extremity there was a basin-shaped cavity, lined with smooth shining membrane, evidently a part of the peritoneal coat, and at the broader end, which of course was the inverted fundus, we perceived the orifices of the fallopian tubes. If any additional evidence was necessary, it was to be found in the complicated fibrous texture visible where an incision had been made.

After the extirpation of the uterus, although the poor woman for three or four days reported herself free from pain, and the tenderness of the abdomen was but slight, while the discharge from the vagina had nearly ceased, and there was not that general improvement which we were so anxious to see, her pulse seldom or never fell below 100. There was great faintness on attempting to sit up in bed, and disinclination to solid food. When I saw her on the fifth day after the removal of the tumor, I felt considerable apprehension. The face was sallow and tumid, and, although she spoke cheerfully, it was evidently with effort, and there was moreover a restless moving of the eye, which betokened evil. The pulse was hurried, vibratory, and small, and the breathing very anxious. She did not complain of pain, but the abdomen was swollen. I applied my hand to the præcordia, and perceived a tumultuous palpitation, the thrill of which extended even to the right side. Mr. Webb saw her in the evening, and like myself was convinced that mischief was going on. There did not appear any indication of treatment beyond the administration of an anodyne. Wine she had taken in moderate quan-

tity for for some days. In the night Mr. Webb was called up and found his patient suffering intense agony over the whole abdomen; it had come on suddenly three hours before the attendants sent for him. The belly was tense and exquisitely tender to the touch, and the pulse rapid and sharp; forty leeches, fomentations, and poultices, were ordered to be applied, and an enema to be administered, but no relief ensued. Rigors followed, and in the middle of the sixth day the poor woman expired.

An inspection of the body took place on the next day. Purulent fluid, to the amount of a quart, was ladled out of the peritoneal sac. The inferior edge of the great omentum adhered to the upper surface of the bladder, and as it was lifted up little streams of pus flowed from numbers of cells and depôts, formed by adhesions between the omentum and the folds of the intestines. There was no evident vascularity, except in the pelvic portion of the peritoneum. I introduced the forefinger of one hand into the vagina, and passed the same finger of the other down into the pelvis; the points of my fingers met between the rectum and the bladder, whence it was manifest that there was a free communication between that passage and the abdominal cavity. The bladder and vagina were carefully dissected out for more close inspection. At the inner extremity of the canal there was a circular aperture capable of admitting the finger, and which consisted of the ring of the os uteri and about three lines of the cervix. Its margin had a dark hue, and we were unable to perceive any attempt at adhesive inflammation. Close upon it were seen the ovaries and remains of the fallopian tubes. The ovaries were of the usual appearance and size. The other viscera, both abdominal and thoracic, were successively examined, but nothing was found particularly deserving of mention.

ON PERMANENT INVOLUNTARY CONTRACTION OF THE MUSCLES.

By SAMUEL SMITH, Esq.
Surgeon to the Leeds General Infirmary*.

It is not uncommon in surgical practice to meet with cases where certain muscles

have remained for a great length of time rigidly and permanently contracted. This state sometimes results from disease in the nerve distributed to the affected muscles; occasionally it is produced by the muscles having their points of attachment unduly and unnaturally approximated for a considerable length of time—as in unreduced dislocations—in the treatment of fracture, &c.; and, in some cases, the precise cause cannot be ascertained.

When a muscle has long been in this state it often remains contracted, solely from habit, even after the cause which originally produced it has ceased to operate; and by breaking this habit, relief may generally in a short time be obtained.

There are certain sets of muscles which act as antagonists to each other, as for example the flexors and extensors of the arm. The contraction of either of these sets of muscles is always accompanied with a simultaneous relaxation of the other. Thus, if the arm be powerfully flexed by the biceps, and the extensors brought into action, the extensors no sooner act than the biceps becomes relaxed.

Suppose then the flexors of the arm to have been some time in a state of permanent involuntary contraction; if the limb, by gentle force, be put in the position of perfect extension, the flexors become relaxed, and by maintaining this position a certain length of time, this unnatural habit of involuntary contraction which has been acquired in the flexors, may be broken or destroyed. To prove the success which may be expected to follow this plan of treatment, the following cases are selected from many others which have come under my notice.

Mary Leak, aged 25, a stout robust woman from the country, was admitted a patient of the Infirmary, under my care, July 30, 1820. She had been fifteen months under treatment, suffering much during the whole of this time from permanent contraction of the quadriceps extensor femoris, the whole of which muscle was in an extremely rigid state. She walked without pain, but an inability to bend the right knee in the least degree, gave her the appearance of having a wooden leg. The warm-bath, frictions, and many other means had been persevered in for a great length of time, without producing the least

* North of England Med. and Surg. Journal.

effect upon her complaint. On the day succeeding her admission, I placed her on the bed on her left side, and taking hold of the ankle with my right hand, grasping the thigh with my left, I succeeded in drawing the heel and pressing it against the buttock, thus producing a perfect flexion of the limb. It is necessary to explain that in accomplishing this, recourse was had more to art and cunning than to force. It was gratifying to find that the rigid muscles had become perfectly relaxed, and in order to destroy the tendency to re-action, two leather straps, with buckles, were placed tight round the upper part of the thigh and ankle, binding the limb in this position, the heel touching the buttock.

She was ordered to remain in bed bound in this manner until my visit on the following day. The relief was immediate and complete. Upon being released next day, it was found that the muscles which had been for so long a period contracted, were quite relaxed; and not only so, but the tendency to involuntary contraction was destroyed. Suspecting, however, it might return, she remained an in-patient ten days: no return of the complaint took place; she was made an out-patient, and appeared as such August 30. She was perfectly well, and had suffered no relapse.

October 20, 1826.—William Holdin, aged 36, admitted a patient of the Infirmary, under my care, on account of the right masseter muscle being permanently contracted. He has been fourteen months incapable of opening his mouth more than to admit the handle of a leaden spoon. Upon introducing the finger within the cheek, and the thumb without, the muscle can be grasped, and in hardness it resembles bone rather than muscle. He has been upwards of a year unable to close the right eye. He was directed to wear a wooden wedge between the teeth, so as gradually to open the mouth, and thus gain upon the contracted muscle. No medical treatment was adopted, and in the course of a week or ten days the mouth could be opened upwards of an inch; the masseter muscle had become relaxed and soft, and he was so much relieved that at his own particular wish he went out, Nov. 10, in order that he might labour for his family; he was, however, directed to continue the use of the wooden wedge for sometime. He was able to take common diet, which had

materially improved his strength, having previously lived for a long time upon spoon-meat, from his inability to open the mouth; he could also close the eye, which he had not done before for upwards of a year.

November 2, 1829.—Miss H. a young lady, residing about twenty miles from Leeds, had the misfortune, nine weeks ago, to fall and sprain her wrist, for the relief of which leeches and the usual applications were had recourse to, under the direction of a very respectable practitioner; in a few days she was better of the sprain, but the ring and little finger were permanently contracted, and she had lost the power of extending them: to relieve this affection various means were had recourse to without effect: she then came to Leeds to place herself under my care. Finding she had considerable pain upon pressure, in the course of the ulnar nerve, I thought it advisable previous to extending the fingers, to apply a small blister (three inches long and one broad) above the wrist, and in the direction of the nerve. The day following the fingers were gently extended; dressings applied to the blister, a compress of lint, and a splint reaching from the extremity of the fingers a little beyond the wrist, was firmly secured by a bandage to keep them extended.

Next day they were removed, the contraction of the flexors had ceased, she had the perfect use of her hand, and has suffered no relapse up to the present time (June 1830).

REMARKABLE BLACKNESS OF TONGUE.

To the Editor of the London Medical Gazette.

SIR,

I WAS lately in attendance upon a patient ill with peripneumony, in whose case there appeared a black or deep purplish colour on the tongue, from whence a similar tint had been conveyed in a slight degree to the expectoration, and existed also, so strikingly, in the faecal discharges, as to give them a resemblance to decomposed blood. On the

first day this appearance presented itself the patient was in a state of improvement, as respected his disease, the appearance of the tongue being then that of his having sucked ink from a pen. In two more days the whole upper surface of the tongue was perfectly black. There was no colour in any article of food or medicine taken which could account for the appearance. Bearing the resemblance of iron, precipitated in the form of black oxyde, my investigation into the cause was made under the impression that I might find the elements of that compound in some of the articles passing through the mouth. After more than one particular search, I found that my patient was in the habit of moistening his mouth with some pulp of apple, which had been boiled in an iron saucepan, (having, however, acquired no colour,) and had dissolved some of that metal. This, upon meeting, as it lodged on the tongue, with the tannin entering into the composition of tea, which he drank occasionally, formed the black precipitate, and gave a complete dye to the adhering fur, as well as to the feces. The circumstance excited considerable alarm in the minds of my patient's friends, which was readily allayed by a demonstration of the cause; and, as the appearances might have been mistaken for morbid symptoms, you will perhaps do me the honour to permit the explanation to appear in your valuable journal. All uncertainty was removed by mixing the apple with tea, in a glass, when an inky cloud was precipitated, whereas, when some apple prepared in an earthen vessel was mixed, there was no such change of colour.

I have the honour to be, sir,

Your obliged humble servant,

NATH. RUMSEY.

Beaconsfield, Nov. 14, 1830.

not altogether attributable to Dr. Alexander Thomson, inasmuch as it appears by a recent publication of his, that he was encouraged in his proceedings by some of the Professors of the University.

I should not have condescended to notice the falsity of the above imputation, had not a very pointed allusion been made to me, as the writer of two or three confidential letters or rather notes, which Dr. Alexander Thomson has thought proper to publish, without even asking my concurrence. They were merely familiar notes, written by me with no other object than to stay the publication of a very furious document in the *Lancet* by Dr. Thomson, and the most malignant interpretation of their contents cannot distort them into any evidence of my being a promoter of his proceedings. But the following will, I trust, completely exonerate me from what you denominate the disturbances in the University:—I was on the continent, suffering severely from indisposition, at the time that Dr. Alexander Thomson and the pupils forwarded their memorial to the Council of the University;—during my absence that memorial was taken into consideration and replied to by the Council, and it was not until after my return to London—and I challenge contradiction of the fact—that I had the slightest knowledge of, much less participation in, the transaction, which not only occurred, but was disposed of, in my absence. It was after my return that the notes alluded to were addressed by me to Dr. Alexander Thomson.

I am, sir,

Your very obedient servant,

JAMES R. BENNETT.

Nov. 15th, 1830.

[See our remarks, page 252.]

PROFESSOR BENNETT'S EXPLANATION.

To the Editor of the London Medical Gazette.

SIR,

A PARAGRAPH appeared in your last number, in which it is stated that the late occurrences in the University are

ANALYSES & NOTICES OF BOOKS.

“L'Auteur se tue à allonger ce que le lecteur se tue à abrégé.”—D'ALEMBERT.

The Philosophy of Sleep. By ROBERT MACNISH, author of “*The Anatomy of Drunkenness*,” and Member of the Faculty of Physicians and Surgeons of Glasgow.

THE “*Philosophy of Sleep*” is not a bad sequel to the “*Anatomy of Drunk-*

eness"—a work by which Dr. Macnish has already gained much reputation with the public; though perhaps he is still better and more favourably known to them by his contributions to Blackwood, under the title of "The Modern Pythagorean." His attempts to combine physic, philosophy, and entertainment, have been in general successful; but it is to be confessed, at the same time, that both his physic and his philosophy have always been of that airy and popular kind which presents the most attractive front to the numerous and respectable class of light readers. The medical literature which the Doctor displays in his pleasing productions is divested of all technicality and repulsiveness; while his philosophy is as unlike as possible to that of the schools—"not harsh and crabbed," but with its severity all softened down, its ruggedness glossed over, and its habitually simple garb decorated with all the embellishment of the graces. It is a flattering thing to the million to have philosophy thus pleasingly presented to them.

There is, however, we conceive, a certain discretion to be observed by writers who publish what are called popular treatises on matters of science. There are truths in abundance, and curious truths too, that are eminently well suited to be laid before popular readers, and desecrated upon and beautified in all manner of ways; but there are also abundant disputed points which should not only not be insisted on, but had better, we assert, not be brought forward at all. The danger lies in the inculcation of error in minds which can with difficulty be led to adopt, much less to reason upon, the reputed facts presented for their reception; nay, it is ill-natured, or looks like taking an unfair advantage, to beguile the attention of the unwary with fascinating allurements, and then to pour in the crude effusions of a dubious philosophy. The majority is so great of persons who never think for themselves, or who still more deplorably can seldom be got to think at all, that when they *are* induced to lend the ear, the opportunity should be charitably seized to instil into them wholesome and irrefragable truth—not such as they may have to unlearn again, or by reason of which they may become suspicious of, or disgusted with the proceedings of their instructors. Three

things, in fact, seem to be required for the diffusion of popular science—1, that the truths be interesting as well as useful; 2, that they lose none of their interest in the communication; 3, that they be seldom, if ever, of a debateable kind, and so be as seldom as possible to be subverted in the pupil's mind.

We do not say that Dr. Macnish has violated these rules of discretion; but we have been led, involuntarily almost, into the remarks we have just made, by some ideas that occurred to us during the perusal of his book. That the subject which he has chosen for the display of his talents is extremely interesting, and that none of its interest is diminished, but rather the contrary, by his manner of handling it, nobody will venture to deny; but we fear we cannot concede to his philosophy much more commendation than this. To the exactness of science the treatise on sleep has but slender pretension: its *philosophy* goes not beyond the title page. There is, besides, throughout the work ample evidence of hasty compilation—a want of compactness and completeness that we should willingly have had the author take more time to prevent. To show that we have some reason for our strictures as well as for our approval, we shall select a few passages from the volume; and that without searching them out too critically or too curiously. Suppose we take the very first sentence of the book—and perhaps we might not readily find a better example of the fault to which we more particularly allude.

"Sleep is the *intermediate state between life and death*; life being regarded as *the frame* in the full enjoyment of its functions, and death as *that* of their total suspension."

Indeed! is this really sleep? or life? or death? Is the intermediate state between life and death—sleep? Is the frame in the full enjoyment of its functions—life? Is that of their total suspension—death? Dr. Macnish says it is; but is he to be understood literally or loosely? We have a shrewd guess, to be sure, what he intends to convey; but we must repeat, that it seems to us to be a wretchedly bad commencement for a book of philosophy.

Again, a few pages on, he asks and answers—"What is life? These bodies are called living in which an appropriation of foreign matter is going on; death is when this process is at an end.

When we find blood in motion, the process of appropriation is going on. The circulation is the surest sign of life. Muscles retain irritability for an hour or two after circulation ceases, but irritability is not life. Death is owing to the absence of this process of appropriation."

We believe unprofessional readers will not be much edified by the information contained in this paragraph; and the profession, we suspect, will take it at a *quantum valet*. For our part, we have seldom seen so many debateable propositions, not to use a ruder epithet for them, collected into so small a compass. Does Dr. Maenish seriously mean to say that the circulation is *the surest* sign of life? Nobody denies but it is a *good* sign when there is no better; but any tyro could remind him that voluntary motion—action, is much better. And is Dr. Maenish not aware that life abounds—and that beyond doubt or question—where nothing like circulation can be detected? And with regard to irritability not being life, we conceive the Doctor writes carelessly: he might have recollected Bichat's definition, and have avoided the error of denying life to muscles which still retain their irritability; he might have reflected for a moment, and allowed that if irritability be not life, it is at least its most essential phenomenon: some of the ablest physiologists have agreed that a thing endowed with life, and a thing endowed with irritability, are synonymous phrases.

But we will not pursue this ungracious course: turn we to matter more agreeable. The following passage we notice, as it involves his theory, on which he seems to value himself much:—"Sleep exists in two states—in the complete and incomplete. In the former, the sensorial power of the brain, medulla oblongata, and medulla spinalis, is suspended, while that of the sympathetic nerve undergoes no suspension. In other words, the functions of voluntary motion, of the senses, and of the mind, are in abeyance, while those essential to life go on as usual. To produce such a suspension in the above faculties, their sensorial energy must be exhausted; it no longer flows to them, as in the waking state, and a temporary cessation in their wonted action is the inevitable consequence. The only powers not arrested are the involuntary

ones, such as circulation, secretion, absorption, respiration, and digestion. Towards them the sensorial power is for ever directed, from the cradle to the grave; and when it ceases to animate them, death ensues. Such is the case in complete sleep, but when it is incomplete, as in dreaming, only certain of the mental functions are arrested, while others continue to act as usual. In this latter state, also, the organs of sense and volition, though generally, are not necessarily suspended, as may be seen in nightmare, and many cases of sleep-talking and somnambulism."

This is virtually Dugald Stewart's view of the subject; as it is also that of Dr. Maenish, the reader will have no difficulty in determining the right ownership of it. And this brings us to the chapter on "dreaming,"—the longest and perhaps decidedly the most interesting in the book. It abounds with anecdotes and curious cases. But we must keep guard on ourselves, and not be led away by mere indulgence: we hasten to notice a few of the medical observations which are pretty thickly scattered through the volume.

"The cure of almost every disease is favoured by sleep. Owing to the activity of the absorbent system, many swellings are diminished at this period, which increase during the waking state; for instance, œdema of the extremities, which often disappears during night, and recurs in the day-time, even when the patient keeps his bed—a proof that its disappearance does not always depend upon the posture of the body. All internal evacuations, such as diarrhœa, menorrhagia, &c. are also checked by sleep."

In the chapter on "sleeplessness"—for our author takes a most excursive range in the management of his subject, not only treating of sleep, but the absence of sleep, as he does also of reverie, abstraction, and the sleep of the soul after death (an interesting speculation, no doubt, but coming rather suddenly upon us when we are only thinking of a simple nap,)—he gives us a piece of advice that may be worth extracting. "Studious men ought to avoid late reading; and on going to bed endeavour to abstract their minds from all intrusive ideas. They should try to circumscribe their thoughts within the narrowest possible circle, and prevent them from becoming rambling and

excursive. I have often coaxed myself asleep by internally repeating half-a-dozen times any well known rhyme. While doing so the ideas must be strictly directed to this particular theme, and prevented from wandering; for sometimes, during the process of repetition, the mind takes a strange turn, and performs two offices at the same time, being directed to the rhyme on one hand, and to something else on the other; and it will be found that the hold it has of the former is always much weaker than of the latter. The great secret is, by a strong effort of the will, to compel it to depart from the favourite train of thought into which it has run, and address itself solely to the verbal repetition of what is substituted in its place. If this is persevered in, it will generally be found to succeed; and I would recommend all those who are prevented from sleeping, in consequence of too active a flow of ideas, to try the experiment. As has been already remarked, the more the mind is brought to turn upon a single impression, the more closely it is made to approach to the state of sleep, which is the total absence of all impressions."

We should gladly close our extracts with a few passages from the chapter on the "management of sleep," but that our proposed limits interfere with this. We must therefore abruptly take our leave. But in doing so we must not withhold our meed of acknowledgment for the entertainment afforded us by the perusal of the volume: we have been captivated by the eloquence—we had almost said, the poetry—of its descriptions; and on the whole we must say that we consider it to be one of the most readable and amusing books of "philosophy" we have met with for a long time past.

MEDICAL GAZETTE.

Saturday, November 20, 1830.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

THE NEW CASE OF MANSLAUGHTER.

WE gave last week, *exclusively*, we may say, for no other weekly journal did

the same, a full report of the inquest in Mrs. Colin Campbell Lloyd's case; but we were not *then* enabled to add the following particulars. When the jury returned their verdict of manslaughter against Long, the coroner requested to know exactly upon what grounds; upon which the foreman replied,—"On the principle of gross ignorance." He and his brethren would say nothing about inattention, as there had not been time between the treatment prescribed and the death of the deceased. He added that they had drawn up a protest, which they wished to make public. It was as follows:—"The jury, in delivering their verdict, think it an incumbent duty on them, on the present important and melancholy occasion, to state it as their solemn conviction, that the time is now arrived for the legislature to adopt immediate measures to prevent any further sacrifice of human life, by stopping persons from acting as surgeons who are not duly qualified to act as such." This sensible, humane, and conscientious declaration, we think, deserves especial record. It proceeds, be it observed moreover, from the *third* jury which pronounced a deliberate verdict on Long; and assuredly if any thing were wanted, after Miss Cashin's catastrophe, to expose more glaringly the gross ignorance and reckless cruelty of the impostor—and at the same time to show up the "unconquerable stupidity" of the higher classes, his votaries and his victims, this last case of Mrs. Lloyd amply supplies the deficiency. A more appalling instance of the audacity of quackery has seldom, if ever, been revealed to the public. It is quackery of the first magnitude—the fame of which will not be confined to our shores, but will traverse all Europe to our shame, and constitute a blot upon the national character. In England alone are such outrages to be observed—here alone are they permitted

to go unpunished—or visited with a penalty so slight as only to supply a stimulus for fresh proceedings.

The time is gone by when forbearance towards such an individual as Long were a virtue. As long as there could be a word said in his favour, even by the most weakly indulgent, the profession were evidently situated in peculiarly awkward circumstances with regard to him. Every expression of severity or honest indignation levelled against him, was construed into an ebullition of spite and envy against the man who was so conspicuously patronized by “the great”—who had “twenty-nine such patients as the most eminent of the regular physicians might envy”—and who, in short, was making twelve thousand a-year by the exercise of his mystery. But the public voice will be no longer restrained—the non-medical press universally, with a single exception*, has opened its battery upon him; and we see not why a false modesty should be allowed to operate in suppressing our own free sentiments on the disgusting conduct of the man. Why should the profession feel delicate about waging war with quacks and quackery? They cannot visit the pernicious knaves, it is true, with the infliction of penalties—or even with the force of ordinary reason and argument; but exposure and disgrace is in their power, and

they should not sparingly be employed. The weapons of wit and the resources of learning are at the disposal of the educated members of the faculty, and it were an ill-judged method of proceeding to withhold them from one of their most legitimate objects—the castigation of ignorant pretenders. Let it not be supposed, however, for a moment that we think such means are adequate to the end in view. Time was, when the shafts of ridicule were liberally and successfully directed against the doings of quacks—when the author of the *Citizen of the World*, himself a physician, was content with playfully exposing the trickery of the craft, and the dupery of their patients; and the *Spectator* uttered a few sneers on the roguery and low cunning of the brotherhood. But it has gone on gaining strength—thanks to the negative protection afforded it by the law—until at length the evil has reached that condition, that it is no longer tolerable. It cries aloud for a remedy, and a remedy it must have. Let men only think of two such cases as those which have lately come to light—two cases out of how many more no man can tell, though he may easily guess—two cases which have only *fortunately* been revealed—the first too glaring, indeed, not to attract public notice, but which would have vanished as a thing of indifference, and undeserving of being followed up, which would have been cushioned, in fact, but for individual exertion—the second a case, the publicity of which was for the most part contingent on that of the former, though in its nature and circumstances more monstrous and appalling. And how many families may there not have been in which deaths, from the malpractice of this impostor, have occurred, but which shrunk from the exposure of domestic details, and the cutting censure which they were aware their folly deserved and should have received?

* The *Standard*—which making a merit of what was in reality only its own neglect, abuses its contemporaries for the free expression of their opinions of Long's conduct. On the occasion of the memorable inquest on Miss Cushing, the *Standard* alone was too much occupied with politics, as it generally is, to notice the proceedings at the time, and *now* in what spirit does it take up the subject at last! Alas! for the feeling, the good taste, the truth, and the consistency of the whole article—which concludes in this way:—“Of Mr. St. John Long, or his doings, we know nothing. Like physicians of all ages he may have been applying medicines of which he knew nothing to a body of which he knew less; but similar calamities as that which occurred in his practice have happened in the practice of every physician who has ever tried (as all physicians have) the counter-irritant system. The faculty would be in a perilous condition if every case was scrutinized in the spirit that has been displayed against Long. The sentence was just what it ought to have been; we are not inclined to say as much for the verdict.”—*Standard*, Nov. 2.

The case of Mrs. Lloyd has some circumstances connected with it that deserve more particular notice ; no case, in fact, could be better calculated to expose the ignorance and presumption of this *soi-disant* " practitioner." Mrs. Lloyd was in the prime of life, labouring under no organic disease ; all her structures remarkably healthy ; and, from her situation in society, a lady whose well-being should be an object of no ordinary solicitude ; the mother, too, of a growing family. But in an evil hour she was introduced to Long, who soon secured her as his patient—or his victim rather, as it proved. He pronounced her to be labouring under inflammation of the lungs, and of course followed up his sentence by directing her to attend him in Harley-Street, to inhale and to be rubbed. The second rubbing was fatal.

The elementary truths of medicine are every day becoming more and more popular ; they have made considerable progress of late, and that to the visible advantage of the community. But there are many whom they have never reached, or who have not entertained them, if they came. Of this number are those who affect surprise at the opposite effects resulting from the employment of Long's specific. Even admitting, however, that this liniment or lotion were so harmless in its nature that some persons were rubbed with it without injury—some, like Sir Francis Burdett, without any effect—and some ventured to wash their hands and teeth with it—and some even to drink it, as it is said—yet the very fact of its being the *same* fluid (admitting this, we say, to be the *fact*) were enough to damn the quack as one of the most rash and ignorant of his tribe. The fellow knew nothing, or at least allowed nothing for the difference of temperaments, habits, and constitutions : young and old, delicate and robust, irritable, nervous, and phlegmatic, all were alike to him. Con-

stitutional treatment he affected to know nothing about—the local was all he pretended to understand ; and for this he deemed his *nostrum* all-efficacious. Perhaps, if it were permitted to be gamesome on so serious a subject, we should except his favourite remedies of drinking a hot glass of punch, and popping the head under the bed-clothes, which he recommended to Mrs. Lloyd when she complained of rigors, or a tumbler of hot mulled wine, which he ordered Miss Cashin, in order to quiet the irritable state of her stomach.

The more one thinks, however, of this man and his dupes, the less one is surprised. We know there are those who say that Long must have been a very clever fellow to dupe so many, and persons too of such note in the world. But we do not think as they do. He must have had a certain quantity of tact, it is true, and cunning, and address, and some knowledge of things in general ; but to cleverness, so far as it implies intellectual talent, and, above all, medical ability, he cannot have the slightest claim. Then, analyse the " twenty-nine," and see of what *matériel* they are composed : the titled personages, the " three," are not unknown to fame ; the remainder a goodly group of persons comfortably circumstanced in society, incapable of forming an opinion of their own upon any subject, though well disposed to be led by any one who would choose to lead them ; not one of them competent to give character or consequence to any protégée of theirs. And such are a fair sample of the sort of persons who would call Long clever.

It would be curious to know what that able and wise judge, Mr. Justice Park, *now* thinks of his conduct, and whether he has not had time to regret the inadequate and very silly sentence which he passed upon him. It is certain, that to this sentence it is owing that the ends of justice are at present defeated ; the accused

manslaughterer of Mrs. Lloyd is no where to be found. Had he been imprisoned (the only punishment both by law and ordinary propriety suited to his crime) he would now be forthcoming to answer for his more recent misdeeds. Nor should it be forgotten how injurious to the public was the personal liberty bestowed upon the man, to go at large and to pursue his ordinary avocations after the first coroner's verdict. It was *during the bail-time* that this second crime of manslaughter was committed.

THE PYRAMID CEMETERY.

Our attention has been called to an article in the *John Bull* newspaper of last week, in which mention is made of our late comments* on this grand national project. Allusion is also made in the same article to some report which seems to have gone abroad—that Mr. Willson had a hand in procuring its insertion in our pages. We are glad to find that the project continues to engage the attention of the public, and that we have been considered in some measure instrumental in bringing it before them. But we protest against the supposition of our being swayed by any personal motive to do what we only conceive to be a part of our public duty. Of Mr. Willson we know nothing further than that he is an architect, and the author of the vast design in which we take so much interest, and on which we candidly offered our opinion. That opinion we may add remains unaltered; the rival plan of a Père la Chaise we continue to think is inadequate, and in other respects, also, not sufficiently deserving of being made a national concern. If the Pyramid plan has any fault, it is to be found in its magnitude and apparent expensiveness. To this consideration of it, however, we promised to recur, and shall certainly do so at the earliest opportunity. In the meantime we would recommend to the perusal of all our readers the Prospectus published by Mr. W. It is to be seen in all of the public libraries.

DISSENSIONS AT THE LONDON UNIVERSITY.

At page 246 will be found a letter from Mr. Professor Bennett, in answer to some remarks in our last No., wherein we stated that Dr. Alexander Thomson had proved by certain documents which he had published that he was countenanced "by some from whom a different line of conduct might have been expected." Mr. Bennett represents us as saying that Dr. Thomson was "encouraged in his proceedings by some of the *Professors* of the University." This is a mistake—we did not use any such expression—because we meant to include in the imputation some *who are not Professors* (see our last No. p. 215.) But Mr. Bennett is right in supposing that we regarded him as one of those who appeared to disadvantage in consequence of the disclosures made by Dr. Thomson; and as he has been so far pricked in conscience as to take our observations exclusively to himself, and has made use in his letter of sundry expressions of injudicious severity, we shall take leave to call the attention of our readers to the nature of his defence.

Mr. Bennett chooses to assume that we referred to one particular act, namely, the presenting of a memoir to the Council on the part of the pupils, and then denies all participation in the transaction, adding that he was on the Continent, suffering from severe indisposition, at the time, and challenging the contradiction of his statement. Now the simple answer to all this is, that Mr. Bennett takes the trouble to reply to a charge which was never made, and dares us to deny what we never called in question. Our allusions were not pointed against one individual, or one particular act, but referred to the fact that Dr. Thomson's statement contained letters and other evidence of his having received countenance in quarters where nothing but discouragement ought to have been met with. We regret that Mr. Bennett's letter has not removed this impression; but as *his* opinion of its tendency is obviously different, we have of course given it immediate insertion.

Mr. Bennett informs us that it was after his return that the letters to which he assumes we refer were addressed by him to Dr. Alex. Thomson—(that is,

* Med. Gaz. vol. vi. p. 698, "Pyramid v. Père la Chaise."

be it observed, after this gentleman had taken a prominent part in those proceedings by which the University had been so much distracted);—and the Professor thus describes his correspondence. “They were merely familiar notes, written by me with no other object than to stay the publication of a very furious document in the *Lancet* by Dr. Thomson.” Mr. Bennett here refers, apparently, to some notes which we have not seen, as the preceding observation is wholly inapplicable to those to which we allude. The letters are indeed “familiar,” for they show the parties to have been on the most intimate and confidential terms; but there is not in one of them the slightest reference to the publication of any document, “furious” or otherwise. In one he thanks Dr. Thomson for some pamphlets, which he promises to return next day, but without saying one syllable for or against their being published in the *Lancet*:—as to the others, they are occupied in detailing the steps of Mr. Bennett’s negotiations for being admitted to the Professorship of Anatomy, in despite of Mr. Pattison’s opposition. One, indeed, is in direct reply to an inquiry made by the pupils on this subject through Dr. A. Thomson, but we repeat that none of them contain the most distant allusion to the object for which, exclusively, Mr. Bennett informs us they were written. We disapprove as much as Mr. Bennett can do, of publishing confidential letters, but that the letters were confidential does not, unfortunately, alter the nature of their contents. Had we chosen to republish them, no comment of any kind would have been required on Mr. Bennett’s communication in our present Number. We respect Mr. Bennett’s talents, and rejoice that he has been made joint Professor of Anatomy; and while we condemn the conduct of Dr. Thomson, in publishing letters which were evidently—most evidently—meant to be private, we lament that Mr. Bennett should have put it in the power of any one to betray such a confidence.

LONDON UNIVERSITY—MR. BELL’S RESIGNATION.

WE find that Mr. C. Bell has abruptly left the London University,—not even

giving a concluding lecture! Some very urgent reason, we presume, must have led to this step, at present so unexpected. Undoubtedly an explanation is due to the pupils, who are thus suddenly deprived of the instruction of a teacher so zealous in his vocation, and so capable of affording them information. To the University the event occurring at such a moment must prove an irreparable loss.

QUARANTINE DISCUSSION.

WHEN a discussion takes place, and both parties complain of our leaning towards his opponent, it is a pretty strong presumptive proof that we hold the balance with an even hand. Such is precisely our predicament with respect to the contending claims of Drs. Gooch and Granville to the merit of having settled the Quarantine Question. The latter gentleman has addressed to us a protest against the “imperfect and partial summing up” in our last Number. We regret to be under the necessity of declining to insert it; for though the Doctor’s letter is not destitute of point, yet it refers to a discussion in which the public are not sufficiently interested to warrant our prolonging it: besides, we must remind the Doctor that we expressly stated in our last number that we did not wish it to go farther*.

On the other hand, a friend of Dr. Gooch, (of course we do not allude to the author of the excellent letter signed A. M.) has taken up the matter in a different way, and written to our publishers, directing that the *Gazette* be not sent to him in future, assigning the appearance of Dr. Granville’s letter as the motive of this very spirited proceeding. The *odium medicum* would seem to run very high among the accoucheurs, for about a fortnight ago, we received from the gentleman alluded to, under the cloak of defending Dr. Gooch, an attack upon Dr. Granville, filled with such ribaldry, and so decidedly libellous in its character, that we refused to publish it. How far this had any weight with our correspondent in inducing him to withdraw his countenance from us, or whether it ex-

* We must beg to correct a typographical error in Dr. Granville’s letter in our last number, page 209, column 1; for laws of dialection, read of dialectic.

clusively depended, as he states, on our admitting the "low trash" of his opponent, we leave it for others to determine. We beg to inform both gentlemen, however, that if they be desirous to continue the controversy, the Wrapper of the Journal is quite at their service; and that Messrs. Longman will be ready to receive—in the shape of Advertisements, as many letters as they please.

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

LA CHARITÉ.

Suicide attempted by Drowning—apparent utility of Bleeding.

THREE unfortunate persons were lately brought into La Charité, who had attempted to destroy themselves by drowning.

CASE I.—A man, aged 60, being imprisoned for debt, and seeing no better method of escaping his creditors, threw himself into the Seine: he was taken out very speedily, although he himself maintains that he was ten minutes under the water. It is easy to imagine that the time appeared long to him, but he does not represent it as having been attended with suffering. He was bled once, and continued well.

CASE II.—An Italian, aged 55, who had formerly enjoyed good circumstances, but had latterly taken to gambling and lost all his means, after wandering about the streets in a state of destitution for twenty-four hours, threw himself from the *Pont des Invalides* into the river, at two o'clock in the morning of the 21st of October. Notwithstanding the obscurity, assistance was immediately rendered; he was taken up, and carried to La Charité. Venesection was practised, and he was placed on low diet to reduce the force and frequency of the pulse, which continued all next day. The following day he was nearly well, and talked of his losses at play, and of his performance in the Seine, with the greatest philosophy.

CASE III. — Fribaut, aged 47, rather given to wine, suffered one of

those domestic vexations which will sometimes occur in the best regulated establishments, and magnanimously resolved to drown himself. For this purpose he threw himself into the river, from whence he was soon rescued and carried to La Charité, where he was bled. Next day he committed some acts which were attributed to petulance, but on the night of the 19th-20th of October he was seized with delirium, requiring the application of the straight-waistcoat. On the 20th he was still incoherent, with a frequent voluminous pulse. He had a purgative clyster, sinapisms to the legs, cold cloths to the head, and forty leeches to the neck.

21st.—The leeches had bled well and he was calmer. At first he appeared sensible, but scarcely had he ceased to be interrogated when he again resumed his incoherence. He was bled, and applications similar to the above persisted in.

22d.—His reason appeared quite restored: countenance and pulse natural.

GLASGOW INFIRMARY.

DISEASED JOINTS*.

AMONG a considerable number of cases of diseased joints, two proved fatal after amputation, and on dissection there was found in both a deposition of purulent matter in opposite knee.

I. *Injury of ankle-joint—purulent deposition in opposite knee.*

R. W., aged 60, admitted 14th January. About six weeks before admission fell down a coal-pit, and struck right leg against the point of a pick, which entered the ankle-joint, and by report passed completely through it. The hæmorrhage from the wound was profuse, and continued occasionally for fourteen days. He also, at same time, suffered a simple fracture of upper third of tibia of opposite limb. On admission, the lower half of right leg was greatly swollen, the integuments undermined for a considerable extent upwards, and there was an opening on each side of the ankle-joint. From the opening at the external malleolus the probe passed easily into the joint, and the tarsal bones were felt rough; from that on the opposite side the probe passed upwards for several inches along the tibia. From both these openings there was a discharge of fetid purulent matter in considerable quantity. General health much fallen off. Countenance pale and sunk. Pulse 120, very feeble. Complaints of pain at lower part of the chest, increased on inspiration; has also considerable

cough, but no expectoration. Habits intemperate. No treatment, but poultices to limb. Fracture of left tibia has united.

An opening was made a few inches above inner ankle, and four ounces of very fetid pus let out. Through this the lower end of tibia was felt bare. He was ordered eight ounces of wine daily, and a grain of opium with two of calomel morning and evening. On the 16th, two days after admission, he had recruited a little, and it was thought that, notwithstanding his pneumonic symptoms, he had some chance of recovery by removing the leg. Amputation was accordingly performed a few inches below knee. The cartilages of tibia and astragalus were found completely destroyed, and the extremity of fibula was so soft as to be easily cut with the scalpel. The os calcis, the naviculare and cuboides, were in a state of caries, and the disease had also affected the ends of the metatarsal bones to some extent. There was nearly an ounce of fetid pus under the astragalus.

For some days after the operation he recruited very considerably; he slept well, his cough was much relieved, and his appetite had somewhat returned. His pulse, however, never fell below 110; his countenance remained anxious, and his breathing oppressed. He was allowed wine freely, and occasionally some spirits, having been accustomed to drink very much for many years. On the 20th he had some diarrhoea, but was otherwise improving. The stump was found to have adhered in the centre, and the discharge was moderate. By next dressing, on the 22d, the wound was somewhat sloughy; the diarrhoea continued notwithstanding astringents and opium; the pulse was 130, and he was evidently sinking. Next day he was in the following state: "Had a rigor last night, which lasted fifteen minutes. Slept ill. Cough much more severe, and expectoration tinged with blood. Was occasionally incoherent during the night. Pulse 150, feeble. Countenance sunk." The following night had another severe rigor, and died on the evening of the 24th, eight days from the operation.

Inspection.—Stump wholly open and sloughy, but knee-joint quite healthy. Left knee-joint contained an ounce of thick greenish fetid pus. Synovial membrane much thickened, inflamed, and in a state of ulceration. Lungs appeared very prominent, and completely occupying the cavity of the thorax; they were of a very dark colour, and oedematous, and there was an extensive effusion of a black coloured fluid into their cellular texture. The usual crepitating sound was wanting, and many small tubercles were interspersed throughout their substance. There were no adhesions, and no effusion

into the cavity of the pleura. A small portion of the lung put into water tinged the fluid of a deep black colour.

I consider death to have been produced in this case in consequence of the affection of the lungs, along with the deposit of pus in the knee-joint, occurring in a constitution previously debilitated by intemperance and a long-continued local irritation and discharge.

II. *Caries of tibia, with ulceration of cartilages of knee-joint—purulent deposition in opposite knee.*

J. G., aged 36, previously healthy, was seized about the beginning of December with acute pain and swelling of upper part of left leg, accompanied with smart symptomatic fever. Leeches, cold applications, blisters, and other means, were employed for four weeks, but suppuration took place, and an incision was made over upper part of tibia, and a large quantity of purulent matter discharged; afterwards another opening was made on fibular side of leg. On his admission into the hospital on 12th January, the knee-joint measured one-third larger than the opposite. The integuments covering it were of a red colour, and it was acutely painful on pressure. There were two sinous openings immediately below joint, one on each side, which discharged a very considerable quantity of thin curdy matter. General health much impaired. Appears feeble and emaciated. Countenance sallow. Pulse 100, small. Bowels loose. No appetite.

On admission the openings were enlarged. we was ordered eight ounces of wine daily, 110t grains of quinia night and morning, and a grain of opium twice a day. The disease, which appeared to be going on in the knee, increased rapidly. The joint became more swollen, and in a day or two the probe could be passed, from the sinus over tibia, into the joint. The discharge continued copious, the diarrhoea rather increased, and his general health did not improve. On the 19th, seven days after admission, he was in the following state: "Strength has been gradually falling off since admission; pain of knee-joint and leg has been more severe, and the discharge more copious and unhealthy. Pulse 120, more feeble. Appetite bad, and bowels still loose." The limb was now removed at mid thigh, by the double flap operation. On inspecting the leg the head of the tibia was found deprived of cartilage, and in a state of caries. The upper part of the shaft was also carious, and numerous foramina of small size were visible on its surface. On the posterior part of the bone new osseous particles, or bony granulations as they may be called, were thrown out in great abundance, while a small portion on its fibular side presented the appearance of incipient necrosis. The cartilage covering the head of the femur was somewhat thickened. About an ounce of

dark coloured fetid purulent matter was found within the joint.

This man, when the source of irritation was removed, improved for two or three days; but on the third day after the operation he became slightly incoherent, and his pulse got up to 120. Next day he had low muttering delirium; and on the 5th he complained of pain in the opposite knee-joint, which appeared considerably swollen, but without tension or redness. He was treated with the carbonate of ammonia, opium, and a liberal allowance of wine, and a blister was applied to the knee. He continued, however, to get worse, and died with symptoms of low typhus ten days after the operation. Besides the pain of knee, he complained also of pain in left wrist-joint, which, however, was not swollen.

On inspection the stump was found wholly open. The soft parts, to the extent of four inches, were sloughy, separated from the bone, and covered with fetid greyish coloured matter. The bone was healthy. In the right knee-joint there was about two ounces of very fetid pus. The synovial membrane was considerably thickened, and in a few points inflamed. The cartilages of femur and tibia were partially destroyed. A small abscess had formed exterior to left wrist-joint. The other joints were examined, but found natural. There was no effusion into pleura, and only some trifling adhesions existed. Both lungs were much loaded with bloody serum, and in the upper lobe of right there was some slight degree of unnatural firmness, scarcely amounting to hepatization.

In these two cases the appearances on dissection were in many respects similar. In both there was a collection of purulent matter in the knee-joint, and some affection of the lungs. In the first the disease in the lungs had gone to a great length; in the other it was very slight, and by no means sufficient to account for the death. There is this difference, however, in the two cases, that in the one there were evident symptoms before death of disease in the joint—there was acute pain and swelling; while, in the other, there was no symptom whatever to lead to a suspicion that disease was going on in that quarter.

These purulent depositions appear to occur more frequently after secondary than after primary amputations, and in general during the suppurating state of the wound. In secondary amputations, where there has been for many days a great discharge of pus, as in compound fractures, wounds of joints, &c. the constitutional symptoms, although they very generally abate a little after the removal of the local irritation, in a few days become more severe, and a sudden determination to some particular part takes place—to the lungs, the liver, or the joints; purulent depositions occur, and death soon follows. This does not appear to take place so often after primary amputations. The

affection seems to arise from the system not being able to accommodate itself to the sudden change, resulting from the want of the drain, to which it had been for some time habituated. "For although the continuance of the discharge would very soon have destroyed the patient, still he is not able to bear the sudden change on the removal of the limb; because the quantity of blood sent to it for the formation of pus, and the natural supply of the limb, was much greater in proportion to the quantity in circulation, than in a state of health."—*Guthrie*.

ALDERSGATE-STREET SCHOOL— MR. KING.

To the Editor of the *London Medical Gazette*.

SIR,

As an interested party, in the following proceedings, have expressed their intentions of addressing a most impartial statement to the Editor of a publication ever recognised by its patronage of falsehood and vituperation, I should be greatly favoured by the following statement appearing in your *Gazette* for Saturday, Nov. 20th instant.

I remain, sir,

A FRIEND TO CANDOUR AND TRUTH.

"Notice.

"A General Meeting of the Pupils of the Medical School, Aldersgate-Street, will take place in the Anatomical Theatre, Thursday, 11th November, for the purpose of presenting their late Teacher, T. King, Esq. with some mark of their respect.

"C. BLAIN, Secretary."

Agreeably to this notice, a meeting took place at the time appointed, Mr. Ryley in the chair. A statement of the purport of the meeting, by Mr. Blair, having been made, the object, *nolens volens*, was attempted to be carried. A spirited discussion was the consequence. The *New Pupils* of the School, ignorant upon what principles they were requested to forward an intention in which they were perfectly uninterested, declared themselves adverse. The following resolution was moved by Mr. Quinn, and carried unanimously by them:—

"Resolution.

"That, as a general body, the Pupils of the Aldersgate-Street Medical School, do not consider it expedient to present such testimony."

EXPENSE OF PROSECUTING ST. JOHN LONG.

THE expenses of the late trial of St. John Long are to be paid out of the fine levied upon the culprit.

W. WILSON Printer, 57, Skinner-Street, London.

THE
LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 27, 1830.

ON CHEMICAL MANIPULATION IN
GENERAL, AND MR. FARADAY'S
WORK IN PARTICULAR.

*To the Editor of the London Medical
Gazette.*

SIR,

THIS subject, taken in an extended sense, embraces a very wide field of operations, and few persons expect to be adepts in the whole of them unless placed in situations or circumstances that afford the gratification of every wished-for apparatus. This is not absolutely requisite; for, taken in a limited point of view, especially as applied to medical chemistry, a vast variety of operations, illustrative of obscure paths in the practice of physic, may be performed, at a very trifling expense, by a person versed in the ground work, or fundamental truths of the science.

As the subject of chemical manipulation has been treated in a very masterly manner by Mr. Faraday, director of the laboratory of the Royal Institution, it may be proper to notice a work which, emanating from a gentleman possessing so many advantages, and so high a rank in the sciences, ought, without doubt, to supersede all others. It may be presuming, but I think I am right in stating, that this work, taken as a whole, is very much calculated to frighten the novice from a prosecution of his studies in chemical manipulation; there are so many punctilios, and such a variety of apparatus to be employed, that really he must be well gifted with pecuniary means who is determined to perform them in toto. I do not mean to infer that the work is not replete

with valuable information to general chemists, and as such does infinite credit to the author, but I do honestly affirm that a work one quarter the size, and one quarter the expense, would have effected infinitely more in making chemistry a general study. Perhaps Mr. F. may yet favour the community with an abridged form of manipulations, shewing noviciates at what a trifling expense and contracted scale a vast variety of operations may be performed equally instructive to the student. It is unfortunately a popular opinion, that practical information in chemistry is only to be obtained in a large and extensive laboratory. This is perfectly erroneous; for on a common table an infinite variety of manipulations may be effected by a reduction in the proportions of the products employed; in the size of the lamps, retorts, receivers, woulf bottles, funnels, filters, &c.; and the only difference of result is, that here you have for your products drachms of matter, and in the extensive laboratory pounds of matter. I put it to the adept in chemistry, whether the characters are not equally developed in the drachm as the pound; the same physical properties have effect, the same angular forms of crystallization, the same results from the action of tests, or re-agents, by adjusting their proportions to their respective equivalent numbers. In section the first Mr. F. speaks of dividing a laboratory into three apartments; one the apparatus room, another the furnace room, and another the drying room: this is all very well for a person who has a national institute at his back. My apparatus room, and my furnace room, consist of two good sized deal boxes, and my drying room is a com-

mon Dutch oven, covered in front with fine gauze, to protect the product from dust when exposed to a common fire at a proper distance. The furnaces I find quite sufficient are Berzelius' lamp furnace, Aikin's blast furnace, and a cupel furnace; all others I consider superfluous, except for the laboratory of a public institution. In section the second, Mr. F. has entered very minutely into the description of the balance, and I think the philosophical instrument maker may glean some information therefrom. These balances, in their high states of perfection, amount to at least 50*l*. I paid 2*l*. for the one I possess, which is accurate to a milligramme, French, or supposing an English grain divided into ten thousand parts, this cheap balance is sensitive to 154 of them, but below that number I will not warrant it. In the same section, page 58, I consider the diagram, representing the closing of a tube by the fore-finger, as an unnecessary demonstration of punctilio; very few will be unable to perform this branch of manipulation. The third section, chiefly devoted to graduation and marking on glass, should, for the novice, be left almost entirely to the chemical and philosophical instrument maker. The fourth section should be read attentively; a great variety of useful information will be gleaned therefrom; the application of substances to steam baths, in different modes, is beautifully demonstrated; the different variety of blowpipes is also treated of in a masterly manner. I think three amply sufficient; a small one for exhibiting the pyrognostic characters of minerals on charcoal or platinum capsules; a lamp blowpipe for the bending of tubes; and the oxyhydrogen one. The table blowpipe may be dispensed with, unless attached to a public institute. In section the fifth, very useful observations are made upon pulverization, washing, and division; but it will be difficult to follow with accuracy every variety of manipulation, and I doubt whether Mr. F. himself accurately repeats them.

With respect to the dropping bottle, noticed in the sixth section, I must say, that during the whole course of my manipulations in Paris, I never had occasion to use, nor to see one used. Very great nicety is certainly required in dropping liquids, especially in forming the products hypsulphuric acid and

iodic acid; these we effected with the pissett, an instrument so well known that I need not here describe it. The process of edulcoration, or washing precipitates upon filters, was never effected by a dropping bottle; we made use of a common tea-pot, into the spout of which is inserted a cork, and through this cork an aperture is made with a small circular file, and into this aperture a glass tube, previously drawn to a fine point, with the blowpipe is inserted; by this method a fine stream of distilled water is constantly directed upon any part of the filter the operator pleases. I cannot sufficiently inculcate the necessity of well washing precipitates; young manipulators too often trust to half a dozen repelations of the funnel; this will not do; not even the taste must be trusted; for apparently all the saline matter is considered carried off when the water passes tasteless; but on testing, it still will be found impregnated, and of course will occasion errors in the analysis. This branch of manipulation is exceedingly tedious, but absolutely imperative. Thus, for example, when we are analyzing a marl by the process recommended by Professor Bendant, the eminent mineralogist of Paris, a given weight, say 100 grains, is treated with muriatic acid until all the carbonic acid is driven off, thrown upon a filter, and edulcorated with distilled water, not only till it passes tasteless, but until the water is no longer acted upon by the tests—nitrate of silver and oxalate of ammonia. The residue upon the filter is dried and weighed, and found to have sustained a loss; this loss, subtracted from the whole, according to the Professor, is the quantity of carbonate of lime contained in the marl. This, by the by, is an error I should have previously noticed were it not that so many pounce upon a person that pushes himself a little forward: the error I have confirmed by four different essays lately made upon the constituents of a marl in Shropshire.

The seventh section of Mr. F. on distillation and sublimation, in a variety of methods, is unexceptionably the best written thing on the subject that I have met with, and cannot be read too attentively by the young, and indeed old manipulator. Where he wishes to avoid expense in purchasing a still, which is not at all requisite for the scientific enquirer, he may do as I have

lately done on the confines of Wales: procure a green glass gallon retort for 3s. 6d. and connect to it, as a receiver, a large black earthenware jug, commonly sold for a few pence; the retort is fixed in a deep iron pot, surrounded with fine sand, and exposed to a common fire; a large cork closes the aperture of the jug, into which the neck of the retort is firmly fixed; the receiver, or jug, is kept constantly cool by a large bottle of water suspended from the ceiling, the mouth of the bottle being partially closed by a cork, and bit of stick at its side. I need not, perhaps, say that the first and last of the products are useless. I forgot to notice a remark of Mr. F. sixth section, page 190, viz. a proto-sulphate, muriate or nitrate of iron may be converted into a persalt by a little nitric, or nitro muriatic acid and heat, and a proto-nitrate by heat alone. I deny the existence of such a product as the proto-nitrate of iron; iron has such an affinity for oxygen, that in contact with nitric acid, it unites at least with two equivalents of oxygen; and there are, in my opinion, only two nitrates of iron, which are the deuto-nitrate and trito-nitrate, which last is the persalt, containing the iron at the maximum of oxidation. I have no observations to make on the succeeding sections until the fourteenth, the intervening ones being treated in a summary and concise manner, without useless punctilio, well calculated for the easy acquirement of a difficult science.

In the last-mentioned section, page 304, Mr. F. remarks that "the lamp which surpasses all others for the ignition of tubes, is that invented by Mr. Cooper," which consists of a frame containing two rows of ten lamps each. I do not know the expense of this apparatus: my single lamp cost me 12s.; this multiplied by twenty comes to some money, and this manipulation I perform at the expense of a few pence. I take a fine net-work of iron, lay a good layer of burning charcoal in the desired direction, place the tube upon this, and cover it well with the same, when a strong heat is kept up as long as fuel is plentifully supplied: this plan is, in my opinion, preferable, for the whole tube is enveloped, whereas the upper surface of the tube must be at a different temperature to the under, with the lamp furnace; this, however, is not of much consequence, if the object of the manipulation is duly effected. In the

eighteenth section a variety of lutes are given: this is much simplified by Dr. Henry, of Manchester, and certainly the Parisian method of forming these differs from both. In the previous section excellent rules are given in pneumatic chemistry for the corrections for pressure and for temperature: the student should be somewhat advanced to profit much by these. In speaking of gas manipulation, I cannot help recording another of my substitutes, which, though not characterized for elegance, certainly is for cheapness. The apparatus contrived by our deeply regretted and illustrious countryman, Sir H. Davy, for the analysis of soils is known to all chemists: not having the apparatus at hand, I proceeded in the following manner:—100 grains of a soil in Shropshire were dried, powdered, weighed, put into a common Florence flask, and treated with an excess of muriatic acid passed through a wetter tube fixed in the cork of the flask; the same also was mounted with another tube, which conveyed the gas away, and this tube was, (at the blowpipe), bent at right angles at equal distances; its extremity, previously heated, was coated with sealing wax, which served as a supporter for the neck of an empty bladder, tied close around it: this inserted in a jug filled to the brim with water, soon dilated, and ejected the water; a jar underneath received this—its quantity denoted the quantity of gas given off, and thereby the quantity of carbonate of lime contained in the soil. I should mention that the necks of Florence flasks in general do not bear pressure of the cork sufficient to render them air tight, consequently the application of lute is generally necessary.

I do not find any thing for particular remark in the remaining sections, which are calculated for manipulations upon a very extended scale, and the young student will find it difficult to select those which are more immediately necessary, unless he is blessed with unbounded wealth. This work is so highly distinguished in the scientific world that I am well aware I shall be considered very presuming in taking such liberties with it; but in this free country the humblest may express his opinions, and the same columns are liberally thrown open for their refutation. Now the whole of my laboratory can be arranged in eight different boxes:—No. 1, containing the furnaces noticed above;

2, glass apparatus; 3, tests, or reagents, which amount to thirty-six; 4, minerals, which amount to several hundreds, arranged in classes, each specimen the size of a good plum; 5, geological productions and varieties of soils; 6, chemical products, the result of analyses upon the mineral, animal, and vegetable world; 7, galvanic, electric, and magnetic apparatus; 8, pneumatic tube apparatus and scales. When I proceed to work a common table suffices: on my left are the scales, with a range of ten test glasses, half a dozen test tubes, and half a dozen watch glasses, forceps, scissars, funnels, and filters, a bottle of distilled and a bottle of common water: in my front, 1st range, a dozen Florence flasks; 2d range, some experimental crucibles, a platina capsule, a silver crucible, (which cost only 7s. at Knight's), some evaporating dishes, retorts, receivers single and double tubulated, and woof bottles; 3d range, lamp blowpipe, lamp of Berzelius, argand lamp, and spirit lamp: on my right are the mercurial and water troughs, with endiometer and gas holders. With this simple arrangement I have been able to traverse a wide field of research, and have certainly been of some service to some of my countrymen, having lately discovered, on a common table, by the humid process, the presence of the best specimen of Swedish iron ore on the borders of Wales, for which I have been well rewarded by the proprietor.

An acquaintance with different arrangements of inorganic matter, and its intimate relation to organic life, must be of infinite importance to the general practitioner: in the natural product, water, its constituents are constantly varying, ever dependent upon the constitution of the strata through which it filters; and the circulating fluid of man is ever supplied at these fountains, generally without any regard to their natural constituent properties. I have lately found three varieties of natural waters in the small space of two miles. A good deal depends upon a want of effort in general medical practitioners: they trust to the researches of National scientific institutions, and will believe no one else; they look to their mandates with as much awe as the Russian regards the Imperial Ukase, and cannot believe that the generous wings of science expand beyond the precincts of Royal Institutions. I hope to see the

time when general chemistry will form a branch of general education: then, I am sure, a new era will take place in professions, trades, and manufactures, for its applications are immense, and often of vital importance to perfection in an art.

I must again encounter popular opinion, and state my conviction, that nearly all the experiments in chemistry can be conducted with much simplicity and cheapness; but order, method, and arrangement, are absolutely imperative.

I beg to say a few words upon the method of division adopted by most teachers of chemistry in the British empire, by Professor Brand, Dr. Henry, and other distinguished individuals. I know I encounter some risk, and perhaps obloquy, in questioning their arrangement of chemical study; but having ardently pursued its study by different routes, I may as well point out that by which, in my humble opinion, the happiest illustration is afforded. In their plan, immediately after the study of each metal, their respective oxides, chlorides, iodides, and bromides, are shewn at their respective degrees, which in the case of oxides have proto, deuto, trito, and per prefixed, to distinguish their relative degrees of oxidation; but *bi*, *tri*, and *quadri*, in the case of chlorides, iodides, and bromides, and this prenomem, is also given to acid combinations: thus we have bitartrates and bicarbonates. In my opinion the whole of the electro-negative elements should be similarly named for their respective proportions, and not have *deuto* here and *bi* there, and *trito* here and *tri* there. Again, after the study of these bodies, I am sure sufficiently intricate, the different saline combinations, of sulphates, nitrates, muriates, borates, phosphates, carbonates, with the same metal at its different degrees of oxidation, must be studied; and finally, this metal's combinations with the electro-positive elements, boron, carbon, phosphorus, sulphur. All this renders the study of the science complex, and difficult of acquirement. In my opinion it is better to study,—1st, the electro-positive elements; 2dly, the electro-negative elements; and 3dly, the physical characters of metallic elements or metals; 4thly, 5thly, and 6thly, the combinations of the bodies of these classes with each other; 7thly, the oxides, non-metallic and metallic; 8thly, the acids, non-metallic and me-

tallic; 9thly, the salts, as borates, carbonates, phosphates, nitrates, muriates, sulphates, iodates, hydrodates, hydrosulphates, arseniates, arsenits, molybdates, chromates, fungdates; finally, and 10thly, the extraction of the metals. There is such an analogy to be found in the action of bodies included under this arrangement that cannot fail to convince a person at all advanced in the science of its happy mode of illustration. To prove this in point, I will take a class of bodies belonging to the 9th division, say borates or carbonates, and having procured the borate or carbonate of potassa, soda, or lithia, it is easy to procure the borate or carbonate of any metal you please merely by putting in play the double affinities:—thus, for example, take a nitrate, muriate, or sulphate of tin, copper, lead, or any other metal you like, soluble, and put it in contact with an alkaline borate or carbonate, you have instantly double decomposition, the borate or carbonate precipitates, and the alkaline sulphate, nitrate, or muriate, is left in solution: these are only two or three of a thousand similar instances of analogy.

Your humble servant,

JOHN ENNIS.

School of Practical Chemistry,
16, Poland-Street.

ON "TURNING."

To the Editor of the London Medical Gazette.

Hoxton Square, Nov. 8, 1830.

SIR,

THE points of interest to which I alluded in my last letter, which presented themselves in the case of Mrs. Rumsey subsequent to the rupture of the uterus were the following:—

1st. That the uterus should have become again impregnated about six months after the extensive injury it must have sustained.

2d. That when labour came on, which it did about the seventh month of pregnancy, that an arm should have been the presenting part, again requiring delivery by turning.

3d. That this operation should have been performed without the recurrence of the former mischief; or, indeed, of any other unfavourable circumstance.

These were the facts.

It may appear presumption in me to offer any remarks upon the operation of turning the child in utero, and the different cases requiring it, as the number of these cases which, in general, fall under the observation of a private practitioner, is but very small; but I am emboldened to do so in consequence of having been for many years the medical attendant of the poor of the large and populous parish of Shoreditch, which has afforded me ample opportunities of meeting with those difficult and alarming obstetric cases, requiring for their management the adoption of prompt and decisive measures. Amongst these, many have occurred in which, whatever might have been the presenting part, the delivery, by bringing down the feet of the child, has been imperatively called for. The great majority of these cases have been arm presentations, the others have been cases of uterine hæmorrhage and puerperal convulsions, and one was the case of ruptured uterus related in my last letter. It rarely happens that an accoucheur is called to afford assistance in arm presentations until the liquor amnii has been so long evacuated as to have allowed the uterus to have contracted round the body of the child, presenting difficulty in accomplishing delivery in proportion to the degree of that contraction. Although the difficulty is very considerable in some of these cases, requiring much time and caution, I have not yet met with a case in which the child could not be turned when the only opposing cause has been the contraction of the uterus.

Previous to my attempts at turning, I have generally taken some blood from the arm, especially if the patient has been young, of a rigid fibre, or in labour with her first child; but in other cases I have only given a full dose of Træ. Opii, either by the mouth or thrown into the rectum; then waiting for the full effect of the sedative being produced on the system, which usually happens in less than half an hour; and assuring myself that the bladder and rectum are empty, I proceed to the gradual introduction of my left hand into the uterus without regarding the arm of the child, and taking much more time in accomplishing the delivery than in determining on its propriety. I have hitherto always succeeded in effecting delivery when the contraction of the uterus was the only obstacle.

It cannot, I think, be too forcibly impressed on the mind of the young practitioner that the time which an operation of this kind takes for its performance should not be a consideration; that the future comfort, and even life of the patient, depend upon a very cautious procedure; but at the same time he must act steadily, never losing the advantage (if he can possibly help it) he may have gained by withdrawing his hand before he gets hold of a foot or feet; for by so doing he will find the difficulty greatly increased of regaining the advantage he was in possession of. A case in point occurred to me the other day. I was sent for to an arm presentation; but having a festering sore on the fore-finger of my left hand, I introduced my right hand with very little difficulty into the uterus; but finding I could not so well succeed in getting hold of the feet of the child, I withdrew it, and having the finger of my left hand defended by a fold of rag, I introduced it into the vagina, but found the os uteri in so testy a mood that it required a great deal of coaxing before it would allow my hand to pass. I should observe that I have found great assistance in my attempts at turning, by the uterus being steadied by moderate pressure being made on its fundus by an assistant. In some of these cases it will be necessary to act rather defensively than offensively against the contraction of the uterus, as was the line of conduct which I was obliged to adopt in the delivery of Mrs. Rumsey, in the labour which succeeded the one in which the uterus was ruptured, fearing that if the uterus had been much acted against, it would have again given way.

The cases of uterine hæmorrhage to which I have been called requiring speedy delivery, by bringing down the feet, have been those in which the placenta has been attached to the whole or to part of the circumference of the os uteri. Perhaps there are no cases in the practice of midwifery that require more determined interference, from art, than these, the delay of a few minutes sometimes proving fatal. I have met with several of these cases, and have always found that their successful termination depended upon early delivery. Whether the os uteri is much dilated or not, if I find in it only a disposition to yield (which is almost always the case), I have

proceeded immediately to deliver. Unfortunately we are often called too late in these cases to ward off the fatal event, the woman often being in articulo mortis at the time of delivery. To these cases, after delivery, I should think transfusion was peculiarly applicable, together with pretty tight bandaging of the region of the uterus.

The cases of puerperal convulsions in which I have delivered by turning, and in others in which I have either employed the forceps, or lessened the head of the child, have gone far to prove to my mind the great advantage of early delivery in these cases; but I have never attempted it until the system has been brought powerfully under the influence of bloodletting. To produce this effect more suddenly and effectually, especially in the young and vigorous, I have taken blood from both arms at the same time, and sometimes from the temporal artery. Previous to attempts at delivery, I have reason to speak well of the effects of an injection which I have sometimes had thrown up per anum, consisting of *Ol. Terebinth.* \mathfrak{z} j. united to *Infus. Sennæ lbj.* and *Tinct. Assafoetidae* \mathfrak{z} ss. by means of the yolk of an egg. The administering of this, after bloodletting, has been sometimes followed by a remission of the convulsions, and by more regular and expulsive actions of the uterus; but should this not be the case, after waiting about half an hour, I have proceeded to deliver without any regard to the degree of dilatation of the os uteri, which, after copious bleeding, is generally disposed to yield.

Some difficulty occasionally presents itself in the delivery of the head of the child after the feet have been brought down. This I have generally found to arise (where the superior aperture of the pelvis is not much diminished in capacity) from attempts being made too soon to turn the face into the hollow of the sacrum, and sometimes even before the head is fairly out of the gripe of the os uteri.

In throwing these cursory remarks together, sir, I have not supposed for one moment that they could afford the least information to the experienced practitioner; but I trust I have been actuated by a good motive—that of not withholding from the junior members of the profession any circumstances which

may assist them in overcoming the difficulties which they must necessarily meet with in their professional career.

I am, Sir,
Your obliged and obedient servant,
J. W. K. PARKINSON.

P. S.—Although a circumstance of little importance, I should wish to correct a term which has been employed in my last letter, viz. “tactics,” which certainly applies better to military and nautical operations than to the humble occupation of a midwife or an accoucheur. It must either have been a lapsus penne of my own, or a typographical error; for I certainly wished to have made use of either the French word *tact*, or of the Latin *tactus*.

MODE IN WHICH THE UTERUS CONTRACTS.

To the Editor of the London Medical Gazette.

SIR,

A FRIEND of mine, a physician, has furnished me with the particulars of a recent accouchement, which may not be deemed wholly devoid of interest; and I am on this account induced to trouble you with it, that if you think it worth while you may, by means of your valuable journal, give it publicity.

The facts of the case are briefly these. The patient is about 25 years of age, in health, and the one alluded to her second labour. Every thing connected with the expulsion of the child appears to have been natural; but the placenta not having been thrown off for an hour and a half, the hand was introduced, and the placenta found adherent by the greater part of its surface. *Above the placenta* a contraction of the uterus was felt, and through its opening the finger could be introduced into the *fundus*. Fifteen minutes were occupied in effecting the separation of the placenta, no contraction of the lower part of the uterus assisting its expulsion. There was but trifling ‘discharge.’ In the former birth exactly the same circumstances occurred, but more time was taken in endeavouring, in vain, to excite the uterus, and in this case scarcely a drop of blood was lost, though the uterus made no ef-

forts at contraction. The want of action in the uterus, in the former case, may be attributed to a large dose of laudanum, which had been given to quiet trifling and ineffectual, but exhausting pains, near the commencement of labour; but I am not informed whether or not it was administered in this last instance.

My friend considers that it may contribute to settle a point of late controversy—“whether there is such a thing as hour-glass contraction of the body of the uterus, or whether it is not effected by spasm of the os or cervix.” I confess myself to have been hitherto inclined to the latter opinion; there is certainly much room for deception to any but a most observant and calculating mind. The very distinction between vagina, os and cervix has just been completely effaced by the passage of the child, nor do they at once recover their former shape, relation, &c. so as to enable us readily to distinguish the one from the other. When the parts, then, are brought so nearly to resemble a continuous canal, and its diameter becomes so nearly the same all the way along, our only clue as to the situation of the contraction must be the relative lengths of its constituent parts, which must be considered very fallacious. Moreover, as in the natural state the os and cervix are more contracted than the body and fundus, it is not extravagant to suppose that—contraction of all having been alike overcome—that of the former, as being most powerful, shall be the first to recur.

The placenta was adherent, and yet there was a contraction beyond it and a cavity beyond that: if, then, the contraction had been that of the os or cervix, the placenta must have been attached to the vagina.

In another point of view, also, it may occasion a *sifting* of allowed, inculcated, and *therefore sacred* opinions—that hæmorrhage is dependent on want of contraction of the uterus, and that when it is deficient, hæmorrhage to a greater or less extent must inevitably ensue.

I am, sir, yours, &c.

W. BERRY.

Hackney, Nov. 15, 1830.

REMARKS ON THE CURE

OF

STRANGULATED INGUINAL HERNIA BY THE TAXIS*.

BY GEORGE M^cLEOD, Esq. Surgeon, &c.

In 1803 I was requested to visit a shoemaker, in Dempster-street, who was labouring under strangulated inguinal hernia. The tumor occupied the scrotum to its very fundus, and had been irreducible for several hours. I determined on giving the taxis a very full trial, actuated in this, partly from having witnessed the most insignificant fingerling called by that name, and partly from analogical reasoning. Cold applications were used for a short time, after which I proceeded to compress the tumor with both hands, and continued to do so, keeping up a steady pressure, with little or no remission, for nearly half an hour; at length a gurgling noise was perceived under the hands, and the protruded parts slipped into the abdomen. My patient suffered no inconvenience afterwards, and was next day at his work.

This case made on me a lasting impression. The force used was very great, as well as the length of time during which it was applied. The sufferings of the patient while under the operation were inconsiderable, and immediately after it they were all gone. Following up this most important fact, I have ever since pursued a similar mode of treatment, and my success has been more than equal to my most sanguine expectations. During these last twenty-two years twenty cases have fallen into my hands, and complete success has crowned my efforts in all of them, with the exception of one case, where the intestine adhered to the sac, and where the complete return of the protruded parts was impossible.

The method pursued by me is very simple. The patient is placed on his back, his knees elevated, so as to relax the muscles as much as possible; the tumor is grasped at its greatest diameter by the right hand, whilst with the left the neck of the tumor is firmly supported and compressed. This last part of the operation, performed by the left hand, I deem of the utmost importance; it prevents the tumor from

spreading out in a lateral direction, and consequently prevents it from doubling up over the external ring. The compression then is to be kept up by the right hand in a steady and gradually increasing manner, and not performed by jerks. If the strangulation have existed for several hours, the operation will seldom succeed in a shorter space of time than fifteen minutes, and in large herniæ a much longer space is often required; I have in such cases continued the compression from *one to two hours*. The difficulty of replacing the parts when the tumor is very large, appears to arise from the difficulty of grasping the tumor, and consequently the additional assistance of one or both hands of another person becomes necessary.

In detailing a few more cases, illustrative of the importance and safety of what has been nicknamed here by a learned Professor "*the two-horse-power mode* of curing strangulated hernia," I shall confine myself chiefly to those cases where I was favoured with the assistance or presence of my professional brethren, and thus remove, as far as is in my power, any opportunity for cavilling or doubting the facts.

A poor woman, who earned her livelihood as a washerwoman, had for many years laboured under rupture. For a great length of time she had never required assistance in replacing the protruded parts. The tumor had been gradually enlarging, and when I was called to see it, in a state of strangulation; it reached to within a hand-breadth of the knee. It had been in this irreducible state for a considerable time. After long-continued attempts to return the parts by my usual mode of compression, I failed. I failed in compressing the tumor properly, on account of its enormous size; I could not compress both the body and neck at the same time, although I had recourse to the contrivance of placing the tumor on my knee, and thus supporting the back part of it. I ordered a drachm of tobacco leaf to be infused in twelve ounces of hot water, and to be administered as a clyster. Nausea and retching soon followed, and on renewing my efforts whilst she was in this state, the tumor began to recede, and returned into the abdomen with the usual gurgling noise. The force was here continued for nearly two hours,

* Curtailed from the Glasgow Medical Journal.

and yet so little inconvenience did she experience afterwards, that on my visit next day I found her engaged at her usual occupation.

About two years after this I was requested by my friend, Mr. Harry Rainy, to visit this same person, who was again in a similar situation. The tumor was perhaps rather larger than formerly. The tobacco was administered, and the taxis persevered in again for almost a similar length of time, before we were successful. After reducing the tumor, I examined the opening through which the parts protruded, and found it so large that the points of three fingers could be pushed into it. She recovered rapidly from this attack; indeed I believe she experienced less inconvenience from that operation than did the operators, for I must confess that my hands ached and were tremulous for two days afterwards.

This poor woman became a third time similarly affected. The large hernial tumor could not be again returned; she had sickness, vomiting, and pain of abdomen, as well as of tumor, yet in this state she walked *on her own feet* to the Infirmary, where, of course, the operation by the knife was performed, and when (I might almost say *of course*) she died.

A carter of the name of Howie, who resided in Mitchell-street, had long laboured under reducible hernia, and from its having been almost constantly down, the herniary tumor had acquired an enormous size. From some circumstance or other, strangulation at length occurred, and I was requested to visit him. My first attempts, although very determinedly persevered in, proved unavailing, but after administering the tobacco clyster, and calling in the aid of an assistant to compress the body of the tumor, whilst the principal part of my own exertions were used in compressing the neck, I succeeded, but not until more than an hour had been exhausted in our united exertions. No bad consequences followed; he was free of pain next day, and made an excellent recovery.

Some years afterwards, I was again desired to visit this same man, but being particularly engaged at the time, it was upwards of an hour before I saw him, when I found Mr. Hood in attendance. I explained to him the plan of treatment by which I had formerly suc-

ceeded, and he at once agreed to a similar line of treatment. The tumor was now of a much larger size; it extended almost to the knee-joint, and could not by any means be grasped by two hands. After the tobacco clyster was administered, Mr. Hood, with the assistance of *two carters*, applied compression to the tumor, whilst I applied pressure to its neck. A full hour was expended under the most unremitting exertions of the four individuals already mentioned, before the displacement was overcome, and yet our patient recovered without a bad symptom.

Sometimes cases occur where portions of omentum fall down, and as little constitutional irritation follows, no attention is paid to the complaint. Adhesions are apt to form between the protruded omentum and sac, and the tumor consequently becomes irreducible. Intestine may afterwards follow this track, and become strangulated. Such complications are very perplexing. We may reduce the protruded intestine and remove the danger, and yet a puzzling tumor may remain. Of this variety the following case appears to be an example.

I received a message from the late Dr. Baird to visit along with him a herniary patient, in the Gallowgate, but on going there, instead of finding the doctor alone with his patient, I found a number of medical practitioners deliberating on this case of strangulated inguinal hernia. The taxis had been tried, and although some of the gentlemen said they had felt part of the tumor give way, from the particular noise which it made, yet the poor man complained as much as ever. After applying my hands steadily and firmly to the tumor for some considerable time, I distinctly felt part of it slip in, when the patient declared, *of his own accord*, that he felt quite relieved. Some swelling could still be perceived, which had the doughy feel of omentum, and which could not be reduced. From this he felt no uneasiness, however, and without further treatment he recovered rapidly.

The late Dr. George Monteath on one occasion requested me to assist him in the performance of the operation for strangulated hernia. He said the taxis and all other means had been tried in vain, and was of opinion that no time ought to be lost in relieving the *stricture* (as it is universally called) by the

knife. I could not resist the desire I had to compress the tumor in my usual way, and after a short perseverance, the protruded parts slipped up under my hands, to the no small mortification of *at least* the doctor's pupils, for with students and junior practitioners the knife is every thing.

After these plain statements, I feel that it would be quite out of place to go over the different opinions and plans of treatment recommended by different men. It may be gathered from the sketch just given, that I do not believe that there exists any thing entitled to the name of *stricture*, however startling this declaration may appear, but that the cause alone why the protruded parts cannot be easily replaced, is the extreme distention by their contents, wind, &c. in the first instance, and enlargement in the second by fullness of vessels. I hinted at the very commencement of these remarks that I had been partly led by analogical reasoning to the line of treatment which I have uniformly followed for many years. The cases bearing some analogy to strangulated hernia, and which had made an impression on my mind, were those of paraphymosis. Here the stricture never becomes greater of the foreskin, but the protruded glans becomes larger, and the cure, although often attempted by dividing the stricture, is best and most easily effected by compressing the glans till it is reduced to its *smallest natural* size, when it very easily returns within the prepuce.

An Irish practitioner, of the name of Geohagan, in the year 1810, is the first authority I meet with who has taken any thing like a correct view of the nature of this affection. He says, "the only indication is to reduce the hernia to the size at which it had been previous to its having been strangulated, and in furtherance of this intention, all our efforts should be directed to the removal of the air and the inflammation, and the surgeon should discharge from his mind every idea of pushing back the hernia."

Although Sir Astley Cooper is admitted to be, by the profession in general, the very highest authority on the subject of hernia, yet in a report of one of his lectures in the *Lancet*, he is made to say, "that it is of no use to make pressure on the hernia with a view of *emptying the intestines of their contents*. *This is an erroneous principle, for the contents of the intestines are very rarely the cause*

of stricture." It is impossible for me to explain in a clearer way my opinions on this subject, than here to declare, that they are diametrically the reverse of those of Sir Astley Cooper, given in the above quotation. The herniary tumor ought to be emptied, as one empties a gum elastic bottle.

It is but due to Mr. Lawrence to state, that although not very explicit about the mode of applying pressure in cases of strangulated hernia, he recommends a longer perseverance in the taxis than the most of authors on this subject do, and he even states, "that success will often be obtained by exerting a general pressure on the whole surface of the tumor."

ANALYSES & NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abrégér."—D'ALEMBERT.

An Inquiry concerning the Indications of Insanity, with Suggestions for the better Protection and Care of the Insane. By JOHN CONOLLY, M.D. Professor of Medicine in the University of London.

SOME things which seem at first most unpromisingly remote, will yet be found, on a nearer view, to admit of a tolerable comparison. An ingenious friend of ours has sometimes amused us by a pretty fair parallel between insanity and the longitude. How many thousands and thousands of pounds have been spent in a vain endeavour to ascertain each with precision; how many speculators, projectors, and theorists, have been occupied in the pursuit of practical and exact methods of discovering each! It is but too true, as we are inclined to think, that the contemplation of the human mind is an ocean in which the mind of man may float with very little chance of aid for its sure guidance; for the metaphysicians are but poor pilots after all. The secure havens to which they would affect to steer us turn out to be but shoals and quicksands, and dangerous delusions. After encountering perils of the deep, and storms which throw us woefully out of our latitude, we frequently find ourselves only in "confu-

sion worse confounded." Nor let the analogy be deemed forced: the squalls and turmoils of our courts of judicature, raised up ever and anon on some moot points of lunatic inquiry, may well bear obvious comparison with any perils, however awful, by land or by water. We have had no board of insanity, like the board of longitude, offering abundant encouragement for the discovery of truth; but we have our commissions *de lunatico* presenting rich harvests to be reaped by interested speculators. In what this state of things will end, we know not; for here our comparative notice must cease. The results arrived at in each instance have been very different: in one, a degree of precision fully amounting to all that is required for practical purposes; in the other we seem to have retrograded: though mightily enlightened, to be sure, by the voyages of discovery in which we have been engaged, we appear to have made little *direct* way towards the object of all our anxious aspirations.

Insanity is a vast subject to explore and comprehend; like some of the metaphysical topics of the old schoolmen, the more it is contemplated the more obscure would it seem to become. The track by which we set out splits and widens, and leaves us, at length, in little short of perfect bewilderment; and our last state, proceeding in this way—the way marked out by the philosophers of the mind—is frequently many times worse than the first. Recent events have given an unusual degree of importance to investigations of the principle of mental derangement, and expectations have been raised which we fear it will prove gratuitous to have indulged. We took up Dr. Conolly's book with hopes of rather a sanguine sort, considering the disappointments with which we had long since become familiar, from our acquaintance with writers on insanity. We know not why, but we *had* hopes that, under all the circumstances, we should have now at last something like what we have long wanted—a good practical book; a book which, abandoning all the idle trilling of preceding writers, should lead immediately to useful results. Such a production, however, we have yet to seek.

The *Inquiry concerning the Indications of Insanity* is very well calculated, so far as a title goes, to attract the read-

er's notice; but the perusal of a very few pages will soon satisfy him of the ennui which the whole is likely to produce. The work is divided into eleven chapters, under these brief and motley heads:—1. Introduction. 2. The present condition of lunatic houses and lunatics. 3. The constitution of the human mind (!). 4. The various degrees of perfection in which the faculties of the understanding are possessed by different individuals. 5. Inequalities, weaknesses, and peculiarities of the human understanding, which do not amount to insanity. 6. Modifications of intellectual activity and power by various stimuli. 7. Modifications of intellectual activity and power by disease. 8. Modifications of intellectual activity and power by age. 9. *Insanity* (at last, beginning at page 287, and occupying about a seventh part of the whole work). 10. Application of the inquiry to the duties of medical men, when consulted concerning the state of a patient's mind. 11. Suggestions for the better protection and care of the insane. This last chapter, of about sixteen pages, being, according to the title page, a sort of appendix, it would appear that the work is principally occupied in acquainting us with what is *not* insanity. Keeping this circumstance in our recollection, there is nothing very objectionable in the plan: we are, indeed, rather inclined to think that it is natural, consecutive, and obvious enough. But plan is not every thing; we usually attach some little importance to the performance, and here we must at once express our decided dissatisfaction. We are utterly opposed to the filling of space with theories—mere theories of mental phenomena—superfluous speculations on the faculties and powers in accordance with some system of metaphysical philosophy peculiarly the doctor's own; and all this at a time when such disquisitions could be so well spared. At page 300 we at length arrive at what our author understands by insanity. It is, it seems, *the impairment of any one or more of the faculties of the mind, accompanied with, or inducing, a defect in the comparing faculty*: a definition than which we cannot readily recollect one more vague, or less practical. This we say deliberately, after an attentive perusal of the whole volume—metaphysics and all. However, for the benefit of those who

will not take that trouble, we shall extract the account of comparison which Dr. Conolly gives in his chapter on the constitution of the human mind; it will afford a fair specimen of his mode of displaying his metaphysical erudition, and is perhaps the key to the "Inquiry," as every thing relating to the "indications" seems to turn on the faculty of comparison.

"When, instead of merely recalling past objects and sensations, we receive new impressions from other objects, and sensations either resembling those experienced before, or differing from them, we can pay an alternate attention to the new sensations, and to those which we can recal to our minds, just as we could to those presented at one time to us. This alternate attention constitutes comparison.

"By means of this alternate attention to objects and sensations present at the same time, or to objects and sensations some of which are present and others recalled, we perceive, first, the particulars in which the present objects and sensations resemble the former objects and sensations; and, by a further alternate attention or comparison, the particulars in which they differ from each other. The same alternate attention leaves no doubt in the mind of the distinctness of the objects and sensations which are present, from the objects and sensations which are recalled.

"This alternate attention or comparison, consequently produces a decision, or an opinion or judgment, concerning the relative nature or degree of all objects and all sensations, present or recalled. This decision, or opinion, or judgment, when exercised, as it commonly is, concerning the relative power of objects or impressions to produce pleasure or pain, is productive of choice, or preference, or desire. If we compare a building which is before us with one formerly seen, the form and size of which are recalled, we are led to perceive that one is larger, or finer, or more convenient than the other, and decide, or judge, or form an opinion to that effect; and if we have to choose between them, we choose that which our opinion or judgment, founded on the comparison, has decided to be the most convenient, or the most likely to be agreeable or pleasurable to us. Both the subjects of comparison may be absent. When we are asked whether a

piece of metal or a piece of cloth, heated to the same temperature, would convey the greatest sensation of heat to the hand, we recal the sensations we have experienced from each of these substances in similar circumstances of exposure to heat, and compare them one with another, by which comparison we are led to the decision that the metal communicates the greatest heat of the two, although we have never made the comparison before. Or the opinion, decision, or judgment, may be exercised concerning the truth of other decisions, opinions, or judgments. When we read a book, we attend to the words and ideas in the page before us; and rapidly recalling the ideas previously acquired on the subject from other books, or from our own experience, and alternately attending to each, or comparing them, we form as we read a succession of decisions, opinions, or judgments; sometimes deciding that our former ideas were correct, sometimes discarding them for others of which the truth seems better established."

The chapter on Insanity is wholly occupied with the examination and discussion of a number of cases of decided mania—cases in which the existence of mania was beyond a doubt; and they are here discussed with the laudable view of confirming the author's particular theory, or, more properly perhaps, to establish the validity of his definition. But all this only augments our impatience; we find we are not a whit farther advanced in the pursuit of the end we aim at. How is the world to be satisfied of the fact of a man's insanity? Certainly not by Dr. Conolly's metaphysical definition; and of course the professions of the title page are but barely fulfilled. The book consists essentially of an *inquiry*, but where is the conclusion? It shews, we must allow, most clearly the difficulty of pronouncing legitimately who is mad and who is not; but of this fact we scarcely needed additional information, and the public have been, unfortunately, but too well convinced of it already.

When we say that the book is not of a practical description, we speak with reference to the great question which we have just now alluded to. That there is a quantity of interesting matter of a practical kind, but relating to inquiries of less importance, throughout the volume, we are by no means disposed

to deny;—the chapter on the duties of medical men contains some excellent things of that sort; and we have much pleasure in laying before our readers one or two passages which struck us as specially deserving of selection.

“When a medical practitioner is consulted concerning a patient who is supposed to be labouring under mental derangement, he cannot avoid deriving first impressions from the representations of those who apply to him. I fear it is not uncommon for practitioners to forget, on these occasions, that their first concern is with the case as a case of disease, which may be cured by proper means; by medicines, and by the ordinary restraints imposed upon the sick. The impediments, which have been already mentioned, to the proper study of cases of mental disorder; the uncertain dangers and the responsibility; and, more than all, established modes of proceeding; combine with the agitation of those who make the application, to disturb and abuse the practitioner’s judgment, and to direct his thoughts towards peculiar and unusual resources. Against this forgetfulness of his office and duty, the best security will be found in such previous study of the subject as I have presumed to recommend, and in improved opportunities of becoming as familiar with what are called mental diseases, as with those which are almost exclusively considered to be corporeal. So prepared, the practitioner must give his best attention to what is related to him; careful not to let any fact escape him; admitting reasonings and conclusions with much reserve; and almost wholly regardless of suggestions designed to influence his proceedings.

“It would seem superfluous to say, that this being done, the practitioner should immediately visit his patient, if sufficiently notorious facts had not shown that such visits cannot always be delayed with safety, and, what is still more extraordinary, that they are sometimes wholly omitted. Nothing shows more strongly the imperious necessity of looking into this subject than the fact that respectable men, practising in this department of the profession—men of known character and feeling, have become habituated to prescribing or authorising force and confinement in cases in which they have never conversed with the patients, or have even never

seen them. How many times such things have been done I do not pretend to say, but the idea of their *possibility* is quite intolerable. It suspends a danger over the head of every rich and eccentric person, which the wickedness of relatives, and the selfishness, or indolence, or timidity, of any man who calls himself a practitioner, may let fall upon him; and from which surely every man ought to be secured. No one can be more unwilling than I am to visit those errors of medical men too severely, into which the urgent solicitations of others, acting on their own facility of temper, may hurry them; but the safety and liberty of men is not to be trifled with. If a practitioner undertakes to give advice in any case, he should, with whatever inconvenience to himself, never fail to see the patient for whom he prescribes. If he cannot do this, he ought to refuse taking any share whatever in the case, and to refer the applicants to others who would be able to give it that prompt attention which, above all cases, it seems to require. Acquainted, as medical men are, with the uncertain and dangerous movements of a lunatic, it is most surprising that they can ever delay a visit to an insane patient for one hour, after application is made to them: their indifference, it is to be feared, has originated in the lamentable indifference often betrayed by the patient’s relatives; for when a human being loses his reason, truly we see something in the whole treatment of him, by his fellow-creatures, which too much reminds us of the destruction of a wounded individual of the lower animals by the rest: all community of feeling seems so often lost, and all pity or regard forgotten.

“The practitioner, then, should never fail to pay an early visit to a patient who is unfortunate enough to lie under a suspicion of insanity. When he pays that visit, his mind should be steadily impressed with the principle that it is not his business merely to look for such evidence as may support the suspicion, and furnish an excuse for the certificate, to sign which he will probably be urged, and for signing which he is to be paid. It is necessary to remember this in all cases, and to hear all evidence, when the case is obscure, with wise suspicion. But if the practitioner is called upon, as sometimes happens, by the proprietors of lunatic houses, he must be mindful of the many circumstances

which may have concurred to deceive others, and by which he must not suffer himself to be deceived. He must remember the effects which must ensue as soon as his opinion is pronounced, and that it is possible the unhappy patient may be so situated as that *he* is his last resource, and the only person in the world likely to befriend him. This will often be the case, until men's opinions concerning disorders of the mind have undergone some change; and many well-meaning persons will be found to advocate unnecessary measures of severity, and more particularly confinement, when the patient's case does not require, and will not be benefitted by confinement. In such cases, let the practitioner never forget that he may be the patient's last and only hope."

The practitioner has, indeed, a most difficult and hazardous duty to perform. He is bound under a weight of responsibility neither justified by his previous education or the experience he may have had. We speak of the generality of medical men, who do not, who may not, enjoy in their preparatory professional education any, the least opportunity of profiting by an experience in insane cases. The same sort of hardship which attends the surgeon by reason of the restriction which the present state of the laws imposes on the practice of anatomy, the same does the medical practitioner labour under, in so far as regards the previous educational preparation permitted him for the management of the insane. Whilst there exists no doubt of the propriety of entrusting to the medical profession the immediate guardianship of the deranged, it must strike even those who think of it most superficially, that except in a very general way the medical man is as ill adapted for the charge as almost any other man in society. There is here a radical defect in medical education; nor until it be adequately provided against, can the bad feeling but too generally entertained by the public towards those who undertake the treatment of insane patients, be expected to subside.

"No provision of the legislature can prevent the occurrence of grievous mistakes, unless opportunities are at the same time given of making medical men as familiar with disorders of the mind as with other disorders; and thus of rescuing lunatics from those whose interest it is to represent such maladies

as more obscure, and more difficult to manage than any other. It would be some compensation for the unavoidable evils of public lunatic asylums, if each establishment of that kind became a clinical school, in which, under certain restrictions, medical students might prepare themselves for their future duties to the insane. It is true that insane patients are not always in a state to be visited by pupils, and that a very strict discipline would be necessary to prevent disorder or impropriety: but such discipline is quite practicable; and such arrangements might be made as would at once guard those patients from disturbance whom disturbance might injure, and present a sufficient number of instructive examples to the student. In some cases, also, the change of persons and of conversation would be actually beneficial to the patients, and would only be what they are now accustomed to, during the visits of persons who come to see them from mere curiosity. Among the many intelligent young men resorting to the London schools of medicine and surgery, some would soon be found who would zealously study mental disorders, and by acting under the physician or medical superintendent, most materially assist him. Opportunities would then be afforded of trying every variety of medical and of mental or moral treatment, and particularly of practising all those methods of influencing the mind, which, separately slight, are, in connexion, very availing; and being only practicable at favourable moments, not only require great discretion, but a degree of superintendence which is at present impossible. We should then see how much could really be done in these affections, and should hear no more of mistakes which have from time to time afforded so much matter for litigation—so much personal uneasiness—and, in some cases, so much oppression and fraud."

In these views we entirely concur with Dr. Conolly; though we must confess we have our apprehensions and our doubts, doubts too entertained by far better judges than ourselves, of the perfect safety of permitting the youthful student too free an access to the insane. The plastic nature of the mind should not be forgotten; unfortunately but too many instances of the baneful effects of such neglect are on record. The danger

of being much about the insane is but too commonly overlooked. There can hardly be a more trying or dangerous situation for a young physician than that of being appointed suddenly to the care of a lunatic asylum. It is a fact that ought to be more generally known that persons who have had the care of lunatics, and much intercourse with the insane—from the frequency of their presence and familiarity with their ways of thinking—their confounding of right and wrong in their notions of things—have themselves, in no few instances, become habituated to the confounding of reason and unreason. Keepers and moral governors have but too often finished their course in downright lunacy, whilst attendant physicians have only escaped frequent calamity of this nature—perhaps from the counter-acting influence of their mixing more extensively with the world. Writers on insanity scarcely ever notice these facts—why, we know not; except that they are unwilling to beget a confirmed feeling of apprehension in the mind of the practitioner who is engaged in the management of the insane: something, however, of the state of circumstances to which we allude, may be gathered from a passage in the Inquiry.

“The chances of life do not offer any condition more dreadful than would be that of a man who, in a state of sound mind, should be condemned to herd exclusively with lunatics. Who, that acknowledges the inequalities of his own mental and moral capacity in different circumstances, and the influence of habits, situation, and associates, on his thoughts and actions, can fail to perceive that in such an unhappy situation the most constant and vigorous exertions of his self-command would be required to resist the horrible influences of the place;—a place in which a thousand fantasies, that are swept away almost as soon as formed in the healthy atmosphere of diversified society, would assume shapes more distinct—a place in which the intellectual operations could not but become, from mere want of exercise, more and more inert; and the domination of wayward feelings more and more powerful. Yet in this disadvantageous state, a glance into the day-rooms of our lunatic asylums will show us that many individuals are actually placed;—many who, though not enjoying a perfect state of reason, are conva-

lescent—are not mad—but are subjected during the mental weakness of their convalescence to the very circumstances most likely to confuse or destroy the most rational and healthy mind. If any subject deserves serious consideration, it is this.”

The latitude which Dr. Conolly has allowed himself in the expression of his opinions, *de omnibus rebus*, is another peculiarity worth noticing. There is a diffuseness, not in his style only, but in the aggregation of his facts, which is strongly characteristic of him as an author. Whoever reads through the chapter on the modifications of mind resulting from the operation of various stimuli, will be particularly struck with this. We read it with pleasure—but we could not forget amid the amusement it afforded, that it tended but little to advance us towards the principal end which we understood the author to have in view. He has shown much taste, and an extensive acquaintance with miscellaneous literature; but the value of the Inquiry is not much enhanced by these accomplishments. An impression, we suspect, would be left on the mind of the general reader, that all men are mad—more or less; the best of us differing from the decided lunatic only in the enjoyment of longer lucid intervals. Dr. Conolly goes on refining to such an extent that the boundaries of sanity and insanity become actually less and less distinct; until at last, in place of finding the “indications” practical and infallible, as he might have expected them to be, the reader finds himself nearly as much in the dark with regard to insanity as he was before he took the book up. This, we think, we may fairly infer from our own feelings during the perusal of the volume. We have, in truth, been teased with its prolixity, and occasionally not a little confused by the multiplicity of its topics; attended, however, by some pleasing assemblages of facts, here and there interspersed, “like oases in the desert,” and impelled by curiosity to see what it would all end in, we found ourselves at last arrived at a conclusion as nearly as possible resembling the famous one in *Ras-selas*. The book is, in fact, a lengthened disquisition on the circumstances of insanity—nor, indeed, of insanity alone, but of every condition of the mind bordering on it—as when the faculties are excited by various external circum-

stances, or affected by disease. Yet with all this ample scope, the main end of the inquiry is deficient: no facility is afforded in addition to means already possessed for arriving at any one certain indication.

We are unwilling to close our notice of the volume, without selecting from the last chapter some of the author's principal suggestions for rectifying the present system of managing the insane. They are wise, and apparently very simple and practicable; but like the thousand and one suggestions of every writer who has treated the subject, they yet want one strong recommendation—the stamp of experience and authority.

“It would be desirable—

“That all persons of unsound mind should become the care of the state; and should continue so until recovery.

“Every lunatic asylum should be the property of the state, and be controlled by public officers.

“Every lunatic asylum should be a school of instruction for medical students, and a place of education for male and female keepers.

“No patient should be confined in a lunatic asylum, except on the particular representation of the relatives or friends, that he could not have proper care and attention out of it.

“All the officers and keepers of each asylum should be appointed by the Secretary of State.

“There should be attached to every asylum a certain number of medical officers and keepers, (residing in the house or not,) ready, at all times, to attend to insane patients at their own houses. The medical associates out of the house should not be exclusively practitioners in cases of insanity.

“As soon as signs of insanity appeared in any individual, notice of it should be given at the public asylum for the district, and the individual should immediately be visited by a medical officer connected with the establishment; either by a medical assistant residing in the house, or by a medical associate out of the house.

“If it was represented that a keeper was required, a keeper should also be immediately sent from the establishment; but in this case the representation should generally be made by the medical attendant of the family requiring aid, and always confirmed by the medical officer of the establishment, or

by the medical associate visiting the patient.

“A register of all the patients in and out of the asylum, should be kept in the central establishment of each district or county; and all persons on the insane list should be visited by a medical officer associated with the asylum, at least once in fifteen days in chronic cases, and at least once in seven days in recent cases, it being understood that the regular medical attendant had the general management of the case.

“Whenever one of the medical officers of the asylum, either assistant or associate, was the sole attendant, he should see the patient, in recent cases, daily. A weekly medical report should be made of each case.

“Visitors (not medical practitioners) should be attached to each asylum, in sufficient number to visit the asylum itself once a week; and also to pay a visit to each person on the insane list, and out of the asylum, at least once in fifteen days; and to make a monthly report of the state of each.

“The patients *out* of the asylum being the majority, and consisting of all whose circumstances would ensure them proper attendance—better arrangements might be made for the smaller number in the public asylums, or central houses of reception, of which there might be one in each county, two in London, and one in any considerable town.

“The total number of lunatics in England and Wales is about twelve thousand. Of these, probably one half are persons in good circumstances, none of whom should be placed in the lunatic asylum, unless by the particular wish of their friends, sanctioned by the usual medical attendant of the family.

“There should be smaller houses in the neighbourhood of the asylum for the reception of one or two lunatics, such houses to be governed by the general regulations of the larger establishments. To these such patients should be sent as require removal from home, but whose friends do not wish them to go to the asylum.

“Of the remaining lunatics in the kingdom, a part, perhaps one half, would be in circumstances which would enable them to defray a portion of the expense of taking care of them; the rest would consist of paupers. The patients of both these classes would necessarily be taken to the asylums.

"No lunatic person should be allowed to remain in any workhouse, or in any private house kept by persons professing to receive lunatics.

"Information should be given at the central establishment of any insane individuals who might be wandering about, and committing or threatening to commit actions inconsistent with the safety and comfort of others; and these individuals should be examined, and if necessary, confined at home, or removed to the asylum. The concealment of lunatics, or the neglect to report the name and case of a lunatic to the asylum, should be punished.

"Attention should be given, on application, to individuals exhibiting any other form of insane propensity;—as great extravagance, continued habits of dissipation, or other eccentricity, which the relatives of such individuals should look upon as requiring some restraint.

"In the medical report of each patient, it should invariably be stated what degree of restraint was required at the time of making the report; and the certificates should be carefully registered.

"Any suggestions made by the visitors of the asylum and the out-patients of the district, should be laid before the officers of the central institutions, and before a quorum of commissioners, or of the board of visitors, at a weekly meeting.

"The visitors should not continue in office longer than twelve months at a time; and should be sufficiently numerous to make the superintendence of out-patients practicable.

"By these regulations all the medical practitioners in each district might, in turn, be accustomed to attend to lunatics; and all medical students might have an opportunity of becoming acquainted with the forms of mental disorder."

Lectures on Anatomy, interspersed with Practical Remarks. Vol. I. By BRANSBY B. COOPER, F.R.S. Surgeon to Guy's Hospital, Lecturer on Anatomy, &c.

WE do not feel persuaded that more elementary works on anatomy are required, and the chance of Mr. Bransby Cooper's "Lectures" ever becoming

very popular appears to us but slender; indeed, there are two objections to it in their present form,—the work is incomplete, and it is expensive. When we say incomplete, we do not mean that it is defective so far as it goes, but that it does not as yet constitute a system of anatomy; and though the price may not be unreasonable, considering the handsome manner in which it is got up, yet fifteen shillings is too much for a pupil (and it is exclusively, or almost exclusively, among them that purchasers are to be looked for) to pay for a treatise on the bones and ligaments merely. A similar volume is promised annually, till the whole be completed; but if as much space be devoted to each subject, relatively to its importance, as is here occupied by the bones, the work will not be finished for eight or ten years to come: we have here but eleven lectures, and a course of anatomy is supposed to extend to nearly a hundred. The plan, we think, injudicious, but the execution is creditable. There are interspersed some good practical remarks, and some tolerably fair plates illustrating the subject of fracture.

OPERATING THEATRE AT GUY'S.

To the Editor of the London Medical Gazette.

SIR,

ALTHOUGH a cotemporary journal has done so much to lessen the weight which any statement coming from a pupil should have, yet, as I have a grievance to complain of, as I am supported by truth, and am neither actuated by personal malice, nor shall descend to personal scurrility, I trust you will make my complaints public. I should wish to suggest to the treasurer of Guy's Hospital the propriety, if not necessity, of constructing an operating theatre sufficiently large to contain the students belonging to the institution. As it is, from the number of pupils which the hospital itself contains, and from the privileges which those of St. Thomas's have of attending the practice here, one-third, I feel sure, are excluded. If the other theatres of the hospital only were too small, the evil would be lessened by the opportunities we have of seeing the same things in other places, *e. g.* should the theatre for anatomical lectures be

too small, either to contain all the pupils or to permit all to see, the dissection and demonstration rooms would in some degree supply the deficiency, but in this case it is not so, as operations to be seen at all must be seen in the operating theatre. I think, then, the pupils have a right to expect that the authorities of the hospital should take some measures to secure to them the opportunities for instruction which they profess to afford, and that if they refuse to build a theatre large enough to accommodate the present number of pupils, they should at least take only so many pupils as will be contained in the present theatre. I have also to object that the evils of the smallness of the theatre are increased tenfold by the conduct of the pupils themselves—of those, I mean, who are fortunate enough to get in—and that for this also the hospital authorities are culpable. I have seen, and that repeatedly, above a dozen persons squeezed into the space round the table which is expressly and solely designed for the surgeon and his own dressers and apprentices, and that, too, in the face of a table of regulations as large as the commandments in a church, directly forbidding any such intrusion. This crowd round the table, of persons who have no right there, nearly excludes the view of the rest in the theatre, and occasions perpetual clamours of “head out of the way there, gentleman in barnacles,” “gentleman in green coat,” and other cries, alluding to any personal deformity the person obstructing the light may possess, in a manner, to say the least of it, exceedingly ungentlemanly—offensive to the persons so addressed, and unpardonably unfeeling to the patient, not to mention its tendency to disturb the equanimity of the surgeon. If the authorities will not comply with my first request, they should at least enforce the regulation they once had the wisdom to make, and thereby lessen the evils of the existing theatre, and for decency’s sake suppress such conduct on the part of the pupils. And now, sir, with reiterated assurances of my veracity, and an apology for the trouble I have given you,

I remain,

Your obliged servant,

A PUPIL AT GUY’S HOSPITAL.

Nov. 17, 1830.

EXPENSE OF PROSECUTING ST.
JOHN LONG.

To the Editor of the London Medical Gazette.

SIR,

IN your last number but one you called upon your professional brethren to come forward to defray the expense of prosecuting Mr. John St. John Long—quack and felon; and considering that the prosecutor was one to whom no person can say that you have been much indebted, the appeal may be considered creditable to your liberality. It was my intention to have complied with your admonition had I not observed in your contemporary, of the same date, a notification that the expenses might be recovered out of the fine levied on the culprit by a statement verified by affidavit. Here, then, I regarded the matter as settled; but, lo! in the next number of your rival for last week, he acknowledges the receipt of two guineas from Dr. Granville, for the express purpose of paying the costs of the late trial. What are we to understand by this? Are the expenses to be paid out of the fine, or is it still left for the profession to do so?

Yours obediently,

ANTI-LONG.

Nov. 20th.

[We are precisely in the same predicament with our correspondent;—we can add nothing to what he has himself stated in his letter.—ED. GAZ.]

MEDICAL GAZETTE.

Saturday, November 27, 1830.

“Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso.”—CICERO.

STATE OF MEDICAL SCIENCE IN ENGLAND.

MORE than once have we had it in contemplation to say a few words on this subject, with reference to an article in the current number of the Quarterly Review, but we have been diverted as often by some more immediate, though not more urgent topic of medical inter-

rest. The exposure of quackery, in which we have been so much occupied of late, must account for the delay, though that occupation may not be found totally irrelevant, inasmuch as it may afford some help of illustration to the matter now before us. The article in the periodical to which we allude is ably written; it breathes a liberal, independent, and enlightened spirit, and abounds with information. It is to be regretted, however, that the writer does not enter somewhat more extensively on his subject; he merely touches upon the mathematical and natural sciences, leaving the state of medical science in England altogether untouched. But how deplorable a picture does he present to us of the condition to which these fundamental branches of knowledge are reduced in this country, and of the humble repute that attaches to their professors: we shall extract the sum and substance of his description, which we find contained in these three propositions:—

“ There is not at this moment within the British isles a single philosopher, however eminent have been his services, who bears the lowest title that is given to the lowest benefactor of the nation, or to the humblest servant of the crown!

“ There is not a single philosopher who enjoys a pension, or an allowance, or a sinecure capable of supporting him and his family in the humblest circumstances!

“ There is not a single philosopher who enjoys the favour of his sovereign, or the friendship of his ministers!”

So much for the encouragement afforded those who aspire to be votaries of science. Let us see if we cannot add something concerning medicine in particular to the preceding statement.

It may be said in general that medicine in this country, though not flourishing by any means as it ought to do, is many degrees above the condition of the physical sciences here described. Medicine is undoubtedly far from being on

the decline amongst us; on the contrary, it is generally acknowledged to have been for the last thirty years singularly on the advance: yet this is far from being all that could be wished. Its rate of progress has been grievously slow — almost disgracefully tardy, when we take into account how much might be effected towards its rapid advancement by the appliance of obvious remedies. Our continental neighbours have outstripped us beyond dispute—we follow, rather than lead, in the march of medical science. In France, under a superior system, or one better calculated at least for the *promotion* of science, the disciples of Bichat, and Laennec, have made strides that distance all competitors in the field of pathology; and both in France and Sweden chemistry has been pursued to an extent of which we have in this country but an inadequate conception. “ Who can tell us here,” says Mr. Herschel, “ any thing about the sulpho-salts? or of the laws of isomorphism? Who among us has verified Thenard’s experiments on the oxygenated acids; or Oersted’s and Berzelius’s on the radicals of the earths; or Balard’s and Serullas’ on the combinations of brome, &c.?” Then, in Germany, minute anatomy and physiology have been studied with an ardour that leaves us altogether in the shade; whilst in Italy medical science has been pursued with the most praiseworthy diligence and success. But in what, may be asked, have we excelled of late years? In nothing perhaps so much as in the plodding assiduity with which we have trod in the tracks of our continental leaders—for we have broken no new ground.

To account for our backwardness and deficiency is not very difficult. It may be briefly ascribed to the anomalous and unworthy condition in which the medical profession is placed in this country compared with the better order of

things observable among foreign nations. Here the whole business of the medical man is resolvable into his perpetual occupation as a practitioner, or as a teacher. Lucrative practice is naturally the great end and aim of all who enter the profession with average intentions—the highest object to which any medical man amongst us can aspire, but one which puts it completely out of his power to advance or improve the science of medicine in any essential respect. “It cannot be denied,” observes a distinguished writer, “that the profession of medicine labours under peculiar disadvantages. The very multiplication of the opportunities of knowledge so harasses and fatigues by the *practice* of the art, as often to afford little leisure or inclination to cultivate and extend the science.” Nor should it be concealed that the arts which, from the constitution of society, are deemed necessary for getting into practice are totally at variance with the spirit of inquiry which would tend to promote the interests of medicine; whilst those who disdain those arts have no alternative, but must either enrol themselves in the already over-stocked lists of medical teachers, or abandon the profession altogether. This was the case with the late Dr. Wollaston, whose splendid talents were lost to medicine, because he could find no abiding place in it, suited to the peculiarities of his disposition and his circumstances. He wanted bread in early life, and would have gladly entered upon the regular career of his profession could he have done so by fair, straightforward, and unbending methods; but he met with repeated disappointments, which filled him with disgust, and induced him to form an unalterable resolution never to prescribe more. His attention was thenceforth turned wholly to natural science, forsaking what might then have been supposed a far more likely road to wealth

than that in which he amassed an ample fortune. Nor was the case very different with the late Dr. Young, the most profound scholar and philosopher perhaps of the age in which we live. It is known, that with all his indefatigable industry and zeal in the pursuit of knowledge, his means, resulting from professional practice and other sources, did not suffice him; much of his valuable time was wasted in anonymous authorship; and it was not until within the last ten years of his life that he enjoyed any thing like a competence, and that in the scanty emoluments afforded him by government as one of the secretaries of the Royal Society, and the then existing Board of Longitude.

And as for teaching, it is just as bad. The business of teaching is not the best mode of employing the energies of those who possess powers of invention; besides our teachers, if they be well paid, are over-worked, or over-work themselves, as in a business of commercial speculation: they naturally wish to make the most of their stock on hands.

It may therefore reasonably be inferred, that as it is with general science, so is it also with medical science in particular. There is no provision for those who would devote all their talents to its advancement—no endowment whatever—and no *honour*—if we except the degraded honour of a barren knighthood, which is occasionally bestowed upon some already eminent practitioner, and then most likely *virtute officii*; it neither blesses him who gives, nor him who takes.

Not so in other countries. In France, for instance, the sciences and scientific men are encouraged and made comfortable: liberal allowance is provided for every member of the Academies; and it is calculated that not less than a hundred thousand pounds are expended annually in pensions to men of science, of whose services, in various ways, mi-

nisters avail themselves. We blush while we add the contrasted conduct of our own government, but it ought to be known: the amount of salaries paid to men of science in official stations in England is the enormous sum of two hundred and thirty-five pounds! In France, too, titles of nobility, and crosses of honour and merit, are abundantly bestowed, and with the happiest effects. We had lately occasion to call the attention of our readers to the respect shewn by the present king to several of the most eminent of the faculty. The decoration of the legion of honour was conferred, among others, upon MM. Biett, Lallemand, Andral, and Chomel; and the dignity of baron, not long since, upon several others, who thereby became associated in rank with Dupuytren, Larrey, and a number of other distinguished characters. It is gratifying to reflect on the liberality of such measures; would that our government would consider the propriety of adopting something similar! We should, indeed, recommend such a step the more confidently, as it is one of those simple and efficient remedies pointed out by the eloquent writer in the Review to which we have so frequently alluded.

Next to this almost criminal neglect on the part of our rulers, that which seems to have most influence on the state of the profession, is the education of the higher classes. As long as society is constituted as it is in this country, neither medicine nor any other branch of science can prosper. The fashion and caprice of the upper ranks take the lead in every thing, and the patronage of quackery is the fashionable folly which at present prevails.

The aristocracy, in fact, have it all their own way. Their wealth, their modes of life, their style, are the greatest objects of attraction to the more numerous middle orders, and are more idolized in England than in any other part

of the world. Money and official station blind the eyes of all. But the aristocracy themselves are also blinded, or at least dazzled by their own attractions; they look with contempt on any other standard of importance. They learn little in their youth that is useful, and when they grow up they have little necessity for study or reflection. They have the means and the influence to command those who long for lands and family connexion, and have but knowledge, talents, and industry of their own. They give the tone to society—fix their own standard of what is to be considered proper and of good report—and the learned and wise, unless they consent to be nobody, and to remain in the outer darkness of low society, must conform to the ordinances which wealthy ignorance has made. Well might Sir H. Davy say, “we may in vain search the aristocracy now for philosophers,” and appeal to the names of Boyle, Cavendish, and Howard, for a contrast to the present, and an example of the past state of things. Ignorance and prejudice now rule the ascendant.

It will thus be perceived that the character of the profession is not only influenced by the sort of education which they themselves receive, but perhaps still more so by the education which is bestowed on the several classes of the community, and particularly on the higher classes; and that above all things, they must be profited by the diffusion of knowledge and refinement. But as the condition of the influential orders seems to be inveterate, and the state of medicine, as to its standing in society, is seemingly fixed by old and prescribed custom; some have tamely given up the point, and settled it with themselves that medical men are for ever doomed to plod on in the same dull and tardy pace, and that the cant phrase of “the alleviation of human suffering” fixes at once their destiny

and their duty. Some have even gone so far as to congratulate the community upon having among them a profession "which performs its useful functions without an incentive to any of those dazzling prizes which it is the privilege, though, indeed, the misfortune for other professions to possess." It is not difficult to infer, that he who entertains such an opinion as this of his profession, and is ambitious of no incentive, will never do any thing towards conferring a lasting benefit on medicine. There may, however, be much truth in the conclusions arrived at with regard to the present condition and future prospects of the profession.

From the observations which we have here thrown together, it may be seen that our main object has been to expose the truly humiliating, the almost degraded, and the unquestionably backward state of medical science in England. To propose a suitable and fully adequate remedy is what we cannot immediately presume to do; that, we may attempt at another opportunity. But it will not, we trust, depreciate from what we have done, that we have not supplied all the deficiency.

ST. JOHN LONG'S LETTER.

WE subjoin a letter from Mr. St. John Long, which originally appeared in the *Standard*, to which it was probably sent as a return for the very magnanimous manner in which that paper has espoused his cause. The document is curious in several points of view, being not less remarkable for the liberties taken with the rules of grammar than for the novelty of its medical doctrines. That Mr. Long is not able to express himself grammatically, is a misfortune dependent on his want of education; nor, indeed, is he more illiterate than most persons who have been brought up to a mechanical trade; and therefore we shall let the peculiarities of his style pass without criticism; but that he should attempt to mislead the public by asserting what is not true, and presume to reason on subjects of which

he has not even the most elementary knowledge, are delinquencies of a very different character, and for which no censure can be too severe. But, first, we must express our astonishment—our consternation—to find that a criminal, just rescued from the punishment he deserved by the sympathetic disposition of the judge, and with a warrant issued against him for a second and more flagrant felony, should be suffered to remain in concealment, without any efficient effort being made for his apprehension.—Why the fellow has actually been bargaining with the governor of Newgate as to the accommodations with which he might be furnished, if it were his pleasure to go to gaol; and inditing letters to the newspapers, in exculpation of his atrocities, dated from his house in Harley-Street! That with all our boasted freedom, which professes to deal impartial justice alike to the peasant and the prince, such a monstrous violation of decency as the leniency towards Mr. Long displays, should have been tolerated, almost exceeds belief—and yet it is so. "The officer knocked at the door in Harley-Street, and was told that Mr. Long was not at home!" Here the search began, and here it seems to have ended! an insult to the public and a mockery of justice.

Turn we now to the letter of Mr. Long, written, or professing to be written, from his own house, a week after a warrant had been issued against him. He says that Mrs. Lloyd, when he first saw her, complained of an "ulcerated sore throat:" this assertion is in direct opposition to that of the unfortunate lady's husband, who swore that she was quite well till she consulted Mr. Long; that, in fact, till, in an evil hour, she was seduced to Harley-Street by some of those decoys who are ever on the watch for dupes, she had laboured under no complaint except the common nervous affection called globus hystericus. The statement is also at variance with that of Mr. Long himself, who told her at their first interview that "her lungs were full of ulcers, which he must rub out." He then informs us, that "by the attraction of his remedy," a discharge was produced, and that this discharge ought to have been kept up, because "when the vessels are overcharged with fetid matter, such an accumulation should be removed," and in doing this he only follows the prin-

ciples of nature, "for she throws out *quality* from *quantity* in infant age, in the various forms of small pox," &c. and a deal of stuff besides, intended to mystify the simple, and baffling the skill of the most ingenious to comprehend;—we should like very much to know, for example, what is the meaning of throwing out "*quality* from *quantity*!" and then the idea of comparing amputation of the breast to the destruction caused by sloughing!

Mr. Long's chief argument, and that most likely to impose on persons as ignorant as himself, is, that all diseases consist of some "*morbific humour*," not caused by his applications, but pre-existent in the body, and which is removed by the "*attraction*" of the means he uses. The more free and copious the discharge the better he holds it to be for the patient; so that he literally made the same speech to Mrs. Lloyd as he had previously done to Miss Cashin—that he would give a hundred guineas to have all his patients in the same state. We will not insult our readers by offering any thing in serious refutation of such a tissue of absurdities as Long's letter presents; but there is one argument which we may mention for the edification of unprofessional persons, and even to them it will be quite intelligible:—Long builds his system on the phenomena of eruptive diseases—particularly small-pox—and he is so ignorant as to suppose that the more copious the eruption the milder the disease; but unluckily it happens to be just the reverse, and that in small-pox the danger is almost in direct proportion to the quantity of eruption, so that the more copious this is, the more severe is the disease. Another amusing specimen of ratiocination contained in the letter is, that effects diametrically opposite are attributed in two successive sentences to checking the discharge; first,—"*if such eruptions or discharges be checked, the whole frame becomes disordered, and the patient dies;*" and secondly,—"*if such an action of the system was checked, the disease, which was general, would become local;*" so that checking the discharge renders local diseases general—and general diseases local, both of which are represented as equally fatal.

Mr. Long asks for "*fair play*," and we know of nothing in reasoning more

fair than to condemn a man out of his own mouth. The desire to avoid even an apparent injustice has led us to insert his letter, though we ought to apologise to our readers for filling any part of our journal with such jargon;—it may amuse them, however, though it cannot instruct.

To the Editor of the Standard.

Sir,—I have taken the liberty of addressing you relative to the case of the late Mrs. Lloyd, which is simply as follows:—She complained of a faintness, great difficulty of breathing and swallowing, restlessness, and ulcerated sore throat. She tried the effect of a blister, from which she experienced no relief; she then found it necessary to apply to me.

An application was made, and a discharge was produced by the attraction of my remedy, aided by a cabbage leaf. Can any thing be more simple, more efficacious, or more scientific, than the removing from the system the morbid humours?

The object of counter-irritation is to remove from the internal parts the inflammation to the surface, and this is exactly what I did.

Mr. Lawrence tells us that—"in order that you may have a chance of removing irritation produced by another action in this way, it is necessary that the new irritation should be more powerful than that which already exists."

When a medical man applies a blister, if the desired effect be not produced, he repeats it again and again, and then tries a seton to keep up a perpetual discharge; yet mortification is not the necessary consequence of such treatment.

The extensive practice I have had for the last four years, affords me an opportunity of judging whether mortification can take place or not under my system, but I am happy to say in no one instance have I ever seen it; and in every case of local inflammation, I produced a discharge of morbid humour, which I continued several months, until all discharge under the daily action of my remedies had ceased, and they could no longer produce any effect, the system being cleared, and the patient being restored to health. And who can deny that I have under Providence restored hundreds of my fellow-creatures, who were abandoned by the faculty in the last stage of consumption and other fatal diseases, and who are now alive and well, and ready to attest these facts?

There is no law to prevent or condemn any man for adopting a new system, although such a system may be contrary to established principles; and this Sir Astley Cooper very fairly declares, when he says,—"*Persons who object to a proposition merely*

because it is new, or who endeavour to detract from the merits of the man who first gives efficacy to a new idea by demonstrating its usefulness and applicability, are foolish, unmanly, envious, and illiberal objectors: they are alike unworthy of the designation either of professional men or of gentlemen."

From Mrs. Lloyd a discharge was produced for the purpose of relieving the affection of the throat by drawing the inflammation to the surface. The desired effect was obtained, but the disease was not *then* removed. At that moment she was taken out of my hands, and placed under Mr. Campbell's care, who knew nothing of my system, and therefore had no power of following it up, or removing the collected inflammatory humour, and without consulting me, adopted his own method, without benefit to Mrs. Lloyd, whom I sincerely regarded, and whose death I deeply lament. Had I been allowed to continue my own mode of treatment, I feel assured no injury could have possibly occurred.

It was a fortnight after I saw my patient, or that she was taken out of my hands, that mortification commenced; had not Mr. Campbell and the other medical gentlemen in attendance sufficient time to prevent mortification, or of healing the sore? Will they affirm to the world that a discharge of morbid humours could do harm in any case, particularly in what they call a healthy subject?

I find that the difficulty of swallowing continued to the last, and that she probably died more from exhaustion and suffocation than any other assigned cause. No sore, irritation, or blister on the chest, could produce suffocation, or prevent Mrs. Lloyd from taking nourishment. Does it not frequently happen that the breast of a female is amputated, yet the patient lives, and no difficulty is experienced?

Mr. O'Shaughnessy exonerated me from the infamous charge of applying any corrosive preparation; for in the case of Miss Cashin (after trying various tests in analyzing the very skin taken from the back of the deceased young lady,) he declared that there had been no deleterious quality applied to it, as was supposed.

How often does a blister produce mortification in some constitutions! When the vessels are overcharged with fetid matter, such an accumulation should be removed, or mortification may be the consequence.

How often, when a copious discharge takes place in the system, either from an exertion of nature to relieve, or by artificial means, by abscesses, boils, &c. in the former case, and blisters, setons, &c. in the latter; if such eruptions or discharges be checked, the whole frame becomes disordered, and the patient dies. This is most ap-

plicable to Mrs. Lloyd, for had the discharge been followed up no possible danger could have occurred, and a valuable life might have been preserved, and the affection of the throat removed. Are not these medical gentlemen responsible for not encouraging a discharge of this nature, once created, until the system would yield no more? I follow the principles of nature, for she throws out quality from quantity in infant age in the various forms of small-pox, chicken-pox, &c. Would not any medical man be culpable if he checked an effort of nature when she was throwing the disease to the surface? If such an action of the system was checked, the disease, which was general, would become local, or perhaps fall upon the lungs, and destroy life.

How can these volunteer medical gentlemen exonerate themselves from the charge, that to gratify their jealousy, they brought against me? I trust that this explanation will satisfy every unprejudiced mind, and that I shall have fair play in this land of liberty, as well as any other public character.

I beg to remain, sir,

Your obedient servant,
JOHN ST. JOHN LONG.

Harley-Street.

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE,
DELIVERED BY DR. ELLIOTSON,
November 15, 1830.

Announcement of Cases admitted.—Spasmodic Contraction of Foot and Hand—Continued Fever—Hemiplegia; effects of Iodine and Strychnine—Electricity in Paralysis from Lead—Different forms of Rheumatism, and corresponding Treatment.

THERE were fourteen cases, gentlemen, admitted under my care on Thursday last. Among the women were two cases of lepra, which evidently were of a syphilitic character, from the leprous spots being in fact tubercles, and from being very dark. I observed likewise in one of the patients an ulcer of the throat, and in the other an ulcer of the tongue. Both women of course denied having had a syphilitic affection, and having been in the way of contamination; but I am satisfied that you will see the two cases cured speedily by mercury. There was likewise a case of eczema; and one which appeared to be merely dyspepsia, for there was no organic disease, nor gastritis: one very curious case of constant spasmodic contraction of the foot and hand of the left side,—the foot is drawn so greatly inwards,

that it cannot be straightened at all, and the hand is likewise drawn in, but not to the same degree. This is exactly the appearance which we observe sometimes in continued fever, and occasionally it remains during the whole of life. You of course must be aware that a state like this must arise from no fault in the arm or leg itself, but high up in the nervous system, exactly as in hemiplegia, the difference between the two being, that in hemiplegia there is a loss of power, but here an excessive irritation of the nerves, or brain and spinal marrow, at their union with the brain or spinal marrow. It is not the nerves of motion that are affected in this case, but the motor nerves of flexion only, the motor nerves of extension being undisturbed. Upon making inquiry I soon found that there were symptoms in the head and neck. The back of the head, and the back of the neck immediately under the head, were exceedingly painful, and on making pressure at the back of the neck, immediately below the occipital bone, there was extreme tenderness: the suffering there, indeed, was far greater than at the extremities,—the extremities suffered from the violence of the tension caused by the position; but at the back of the neck there was a suffering from inflammation, extreme tenderness on pressure, constant aching, and constant heat. I of course ordered no measures to be adopted with the extremities, but directed all my attention to the upper part of the spinal marrow and the neighbouring part of the head. The disease I presume here is in the medulla oblongata, or the cervical portion of the spinal marrow. I ordered the patient to be cupped in the nape of the neck to the extent of a pint, and such was the effect, that the instant the blood was withdrawn, the hand became perfectly straightened, and remained so for some time. This was a striking proof that the practice was right, and I have no doubt that by perseverance we shall cure the complaint; for this reason—that it has existed only six days, consequently there is probably yet no organic affection, but it arises simply from inflammation. This is a more minute division of nervous disease than we generally see; the disease is not only confined to the nerves of motion, but to those nerves of motion that cause the flexion of the muscles. The case is well worthy of your attention. There was likewise among the women a case of anasarca.

Among the men, you will find a case of epilepsy—one of well-marked chronic gastritis—one of deep-seated inflammation above the knee, which does not appear to be rheumatism—one of mere nervous palpitation, without organic disease, which came on from anxiety of mind, or some little temporary disturbance of the system—one of scrofulous caries of bones, with anasarca—one

case of continued fever—one of itch, which might be easily mistaken, as it is the pustular description of itch, which, of course, if treated with any thing but sulphur—at least with the ordinary remedies of cutaneous diseases—continues to go on month after month, and yet looks so unlike common itch that it is sometimes mistaken: its true nature I discovered chiefly by looking at other parts of the body, and finding about the wrists and the breasts the well-marked common form of the disease, notwithstanding the large pustules, which had any thing but the appearance of itch in other parts—one case was scarlet fever—and one continued fever.

As so many cases were admitted, of course a great many had been presented during the preceding week, and among them were six women.

The first of these of which I will speak was continued fever, which occurred in one of those poor German females who perambulate the streets, crying “Buy a broom.” She was a native of a village a few miles from Frankfort on the Maine. It did not appear to have arisen from contagion, and was cured as you will see almost every case of continued fever brought into the hospital, by the most simple means,—by enjoining, first, the most perfect cleanliness. I had her thoroughly washed when she came in, and then I employed tepid ablu-tion or cold ablu-tion several times a-day, whichever was most agreeable to her, and whenever she felt hot. As there was pain in the head, I directed fifteen leeches to be applied to the temples, and these were repeated: in a few days there was tenderness at the pit of the stomach, but her debility was such that I was afraid to apply leeches again, and therefore ordered a blister to be applied on the epigastrium. She took of hydrag. c. creta five grains every four hours. Her mouth became slightly tender, her tongue clean, and she was soon convalescent. She was at one time in a state of great debility, but by allowing her milk and two pints of strong beef tea per diem, and combating the local symptoms as they occurred, the complaint gave way. It is said by some of the French writers, that where there is pain in the epigastrium on pressure, blisters are an improper mode of treatment; that they produce great irritation, and we ought only to apply leeches. I know, however, that where there is such debility that we cannot apply leeches, or where we have applied leeches frequently, and still something more is requisite to be done, you may have recourse to blisters with great advantage: the only injury that arises from the application of a blister is, where it is allowed to take the place of the loss of blood,—where it is necessary that a certain quantity of blood should be taken away, but it is

not taken away. In such cases if you merely apply a blister, you produce great irritation; but if you remove a certain quantity of blood, either by the arm or locally, after you have done this once or twice, or more frequently, the time may arrive when blisters will be very useful from the continuance of the symptoms. Sometimes blisters may not be required; but if the irritation continue, after you have emptied the part well by means of leeches or general bleeding, you may have recourse to blisters with great advantage. That was the case here; her tenderness was totally removed by the blister. She recovered so soon, that though she was only admitted on the 21st October exceedingly ill, she was presented and able to walk home on the 1th November.

This is the common treatment that I have employed in continued fever, and I have only lost one patient with that affection in this hospital for two years. That case occurred in a man who was admitted in the last stage of typhus fever, with muttering delirium and a black tongue. It is simply by the employment of a moderate antiphlogistic treatment; finding out any local inflammation or irritation that may be present somewhere or other, subduing it by general or local bleeding, or blistering a part, by producing a moderate tenderness of the mouth through the means of calomel, or if the bowels will not bear it, by hydrarg. c. creta, or if this irritate the bowels, checking its action by a moderate quantity of astringents or opiates, and taking care to use tepid abluion, or cold abluion when the temperature is too high, and supporting the strength in cases of great debility by suitable diet, that I generally cure the disease.

There was likewise among the women presented another case of continued fever, which was treated precisely in the same way, but it was much milder, and the local irritation there was chiefly of the chest. In fever you will almost always find, if you apply the stethoscope, a slight rattle in the bronchia; there is generally a little irritation in the bronchial tubes. In this case it was not the head that suffered disproportionately, nor was it the abdomen, but it was the chest, and though that was not to a great degree, still it was sufficient to induce me to apply leeches to that part: hydrarg. c. creta was given in the dose of five grains, three times a day, and she was kept on slops. Tepid abluion and cold abluion were not had recourse to, on account of the affection of the bronchia; for I think there may be, perhaps, some danger of pneumonia being increased, if you chill the surface of the body, and in this case, at any rate, there was not sufficient heat to make me anxious about it, and therefore it was not adopted.

There was presented a case on which I gave a clinical lecture some time since, that

of a woman with pleuritis, who was cured by bleeding, followed by a large dose of opium and by calomel. She never had any relapse, and went away well.

There was likewise presented among the women a case of hemiplegia, which was much better before she went out, but it would be wrong for me to say that the treatment did her good. It is common in cases of hemiplegia, if a patient be kept on moderate diet for the disease, to amend without taking medicine. I have no doubt but that many remedies which have been boasted of in cases of hemiplegia have acquired their fame from the disease ceasing of its own accord. Hemiplegia frequently arises from congestion, or an effusion of blood or serum in some part of the head; and after a time the former ceases, or the latter is absorbed. If a person be kept on low diet, should there be any tendency to a return of the congestion or effusion, it is often prevented, and the absorption of what was effused goes on. I treated this woman with tincture of iodine, which has been greatly praised in cases of hemiplegia, and I believe it sometimes does good by exciting the absorbents. This woman had been ill nine months with hemiplegia, but there was no pain of the head, no drowsiness, no giddiness, and nothing discovered in her but that she had lost the use of the right side, or at least its use was impaired. I therefore at once gave her the tincture of iodine, first beginning with ten drops, and increasing the quantity gradually till I arrived at forty drops, which she took three times a-day; and she recovered the use of her arm and leg so much that she was desirous of going home. However, I have frequently given iodine without this success. In the first instance, where there is pain of the head, tightness of the forehead, drowsiness, giddiness, you should resort to the remedies for common inflammation—cupping, leeching, bleeding in the arm, but cupping particularly, and leeching; blisters in the neighbourhood, setons, purgatives, the moderate exhibition of mercury, and particularly low diet; but in doing this great care must be taken not to go too far. I am sure that many persons, after apoplexy and hemiplegia, are kept so low that they sink, and nature is prevented from repairing the injury that has taken place in the brain. Moderation is to be observed, but there is no specific rule that can be laid down. On the one hand, antiphlogistic treatment is the best in the first instance, and perhaps imperatively demanded; yet on the other hand, you are always to remember that there is a danger of carrying it too far, and after a time it is best only to keep up a drain from the neighbourhood, pay attention to the bowels, and to nourish the patient moderately, but avoid strong stimuli. In this state of things, after a time, if there be no inflammation left, then iodine is sometimes of

service, but not of that immense and general benefit which many suppose. Those who study morbid anatomy will see that this cannot be so, for they know that after a person has been attacked by hemiplegia, they find softness of a part of the brain, sometimes merely extreme congestion, sometimes an encysted tumor, sometimes a growth of bone or fungus, and sometimes a cavity has occurred, in which an effusion had taken place, and the two sides of which have grown together, and the part become very hard. It is evident, therefore, that many cases must occur in which no benefit whatever can be produced. I may make a similar remark respecting electricity and strychnine. Electricity and strychnine have been much recommended in paralytic affections, but they no more than iodine, or other stimulants, can do good in a large number of cases; when there is mere loss of power, then electricity, or *nux vomica*, may be of great benefit; and where the absorption of an effusion is all that is wanted, electricity may likewise be of service.

You will recollect a case of a man who was six or eight months in the hospital with paraplegia, in William's ward. I found there was tenderness of the spinal column, and suspected that there would be no use in giving him *nux vomica* or strychnine, or in employing electricity, and I applied setons and moxa in the part where there was tenderness, and kept him on low diet. This I saw was an affection of the spine or the membranes, but I determined on giving him the chance of benefit at the same time from strychnine or *nux vomica*, and he took them, one or other, for eight or ten months, and they produced a tingling down the arms and legs, but they did no good, and I have as frequently failed with them as with iodine. Strychnine unquestionably stimulates the nervous system, and no more; but as paralysis frequently arises from chronic inflammation, or pressure, or change of structure, it can in those cases be of no benefit, and may do harm; and when there is effusion, although electricity may do good, I do not apprehend that strychnine can. There are cases in which the nervous part is merely in a state of torpor, and in these strychnine may be of use; but these instances are very inconsiderable. I have employed strychnine, and more frequently *nux vomica*, but I cannot say with any sort of satisfaction. Antiphlogistic measures, when employed in the first instance, will often cure this disease entirely; at any rate, if they are moderately carried on for a length of time, they will lay the foundation for a cure at a subsequent period. If you remove all the circumstances of inflammation and congestion in the first instance, I have no doubt, though no benefit takes place for some time afterwards, that ultimately you will do more

good, and the efforts of nature will be more effectual, than if you do not employ them; and that strychnine, iodine, and electricity, will obtain the credit of the subsequent improvement often very undeservedly.

There has been a good instance presented during the present week of the use of electricity in a case of palsy, where there could be no effusion, no organic affection whatever, inasmuch as the disease was palsy of the wrists from lead. The man was in William's ward, and had been ill a year with palsy of the wrists. Here the brain was not affected, nor the spinal marrow, but the nerves; their cords or terminations, or both, were affected in the part in which the paralysis was seen. This was paralysis of the nerves in the part itself, and likewise, no doubt, of the muscles themselves; in fact, the hand was doubtless diseased altogether: the disease, I presume, was a mere deadness of the parts, from the sedative power of the lead. This man was aged 58, and had been a painter, and it appeared that he had had no colic, but suddenly his hands had dropped. This was a kind of case in which I had seen benefit result from the use of *nux vomica* or strychnine, and I had indeed frequently given the one or the other with great advantage. I ordered the wrists to be electrified three times a-day with shocks, and I gave him strychnine, beginning with the tenth of a grain, three times a day, which I gradually increased to the eighth of a grain. He improved so rapidly that I was sure it must be the electricity which benefited him, and I therefore all at once left off the strychnine. I was satisfied that the strychnine had been of no benefit, for three reasons; first, from the smallness of the dose; secondly, none of the peculiar effects of the strychnine had been produced, for when it does good it generally produces a catching of the extremities, and a tingling sensation along the limb, but none of these circumstances occurred; and, thirdly, his cure proceeded with such great rapidity. I thus became satisfied that it was the electricity which produced the favourable symptoms, and I was confirmed in this opinion by the fact, that when I ceased to administer the strychnine, his cure proceeded with equal quickness: in fact, he took the strychnine for only ten days, when I suddenly omitted it, and he continued to mend rapidly. He was admitted on the 2d of October, and went out, able to work, on the 11th November. He was cured by the electricity, and would have gone away sooner but that he had a slight attack of rheumatism in the knee. The effect of the electricity was very satisfactory.

During the week several cases of rheumatism were presented, all cured, and I will point out to you the principles of the treat-

ment which I adopted ; it was very simple, and is for the most part very successful.

Among the women, one case of rheumatism was admitted, of a character that indicated the employment of stimuli.

Jane Davis, æt. 22, had been ill four months of rheumatism, attended with violent pains of the joints, so that it was necessary that she should come into the hospital, and I found that these pains were relieved by warmth. At first she had been seized with rheumatic fever, that is, active rheumatism, heat of the body, thirst, dryness of the tongue, profuse sweating, and pains of the joints, attended by heat. This was all over, and she was now in an opposite state ; the parts were found to be relieved by warmth, but they were never warm of themselves, or rather they were cold. This is a distinction always to be made in rheumatism. You must inquire if the parts are hot or cold ; if warmth does good or harm. If the parts are too warm, it is wrong to give stimulants ; but if, on the contrary, they are cold, then stimulants are necessary. This woman being relieved by warmth, she was ordered to have a hot bath every day, and half a drachm of ammoniated tincture of guaiacum three times a-day, with full house diet ; as she required stimuli, the full house diet was added. With respect to the hot bath, it is absurd to think that people can derive benefit from it in the way it is often used by patients. Sometimes they will use it once, or perhaps twice a-week, and to be placed in warm water once or twice in seven days, for ten minutes, can do little good ; and yet after such an employment of it as this, patients will tell you that they have tried the hot bath, but it was of no benefit. It ought to be used at least four times a-week, and if possible, every day. Some people cannot bear it every day, even if they only stay in a short time, from its producing profuse sweating ; but frequently they can bear it when they tell you they cannot, if you use it but moderately warm, and they stay in only a few minutes. In the treatment, however, of cutaneous diseases and rheumatism, it is quite nonsense for people to employ the hot bath once or twice a week. Many patients can be gradually brought to use it, not only once, but twice a-day, and then derive so much the more benefit. I have seen diseases cured, which had baffled all other means, by the patient going into the bath three times a-day, and remaining in it an hour each time. This woman had it every day. With respect to the tincture of guaiacum, it may be used in any quantity that will do good. I always think it unjustifiable to give a large dose of medicine, if a small one will answer the purpose, and I, unless in a violent complaint, restrict myself to a small dose until I find it fails in doing good, and then I gradually increase it. Half a

drachm of ammoniated tincture of guaiacum is a fair dose ; some persons, however, will bear a drachm, and some several drachms. There was a man in the hospital last spring, in whose case I found it necessary to increase the dose to two, three, four, five, and then six drachms, when it answered the purpose fully. You find it mentioned in some books that these large doses are required in many cases, and it is certainly a fact that there is no rule for a dose of this medicine any more than of another. Many persons will be made sick by such a dose as three drachms ; many persons will be purged violently, and others might, for what I know, have gastritis produced ; but there are some who will bear it, and who are not cured with less. If this medicine do not produce the good effect you desire—does not warm, or warms but tranquilly, and yet does not disagree with the stomach or bowels, the dose should be gradually increased. I have never given it in such doses as these, except for the purpose of stimulating the system throughout. It is mentioned by Sir Gilbert Blane, in his *Medical Logic*, that in one form of acute rheumatism, in persons of a scrofulous disposition, the large dose of half an ounce is very serviceable. I have not tried it, but if it purge the patient well, or sweat him, I can conceive that it may do him more good than it would do him harm by stimulating him ; yet I should have thought, in cases of active rheumatism, as it is a stimulating medicine, if it do not make the patient sweat, or purge him well, there would be considerable danger of its stimulating effects doing him great harm : still it would be absurd to deny a fact. I find it one of the best stimulating medicines in cases of chronic rheumatism, where the temperature of the patient requires to be increased, and warmth does good. This patient had been ill four months, but by this medicine, and the hot bath, she was well in seven days. This was a rapid cure, but I believe there was no deceit in her account.

The other cases of rheumatism were of an opposite character, and would probably have been injured by such treatment.

One case was that of a woman, in Mary's ward, who had also been ill four months, and although the affection had continued that time, it was as active as though she had only been ill four days. Rheumatism is frequently active when it has existed for twelve months, that is to say, the parts are hotter than they ought to be, and heat aggravates their pain, so that if you apply any stimulants you do mischief ; but if you employ the common treatment for acute rheumatism you do them good : acute and chronic are terms by no means synonymous with active and passive or indolent. In this woman I found some slight affection of the chest ; there was palpitation of the heart and some degree of

cough, and therefore I had recourse in her case to general bleeding. In active rheumatism, however, whether acute or chronic, I very seldom resort to general bleeding; never, indeed, unless there be some internal inflammation; for I always find local bleeding answer every purpose. If you take the indication merely from the buffiness of the blood, you will find if you bleed the patient to ten pints (and there are cases on record in which that quantity has been extracted,) the last pint may be buffed as much as the first. This has been mentioned by several authors. As long as the least rheumatic inflammation exists, I know that the blood may be buffed. I was once accustomed to bleed generally in active rheumatism, but I find that local bleeding, with colchicum or mercury, is quite sufficient, and I never have recourse now to general bleeding, except where, as in the present case, there is internal inflammation. There was inflammation in the internal parts of the chest, and therefore I bled the patient in the arm, but had it not been for that I should either not have bled her at all, or I should have applied leeches to the parts most affected. Sydenham once bled all his patients profusely in acute rheumatism; but finding one recover just as well without venesection, he gave up the practice. The medicine in this case was half a drachm of *vinum colchici*, three times a day. I believe many practitioners make it a rule not to employ the *vinum colchici*, but colchicum itself in powder, or the tincture of the seeds, and they may be of equal service; but we fall into the habit of employing particular forms of medicines, and I always employ the common wine. The quantity administered to this patient produced purging, and then she was considerably better. I have sometimes seen colchicum do good in active rheumatism, without any sensible effect beyond that benefit, but for the most part I have not seen it beneficial unless purging were produced. With this treatment, although she said she had been ill four months, she became so well that though she was only admitted on the 28th October, she went out on the 11th November, as far as could be seen, without any complaint.

There was a case precisely like the last admitted on the 28th of October, (the same day,) in Jacob's ward, and is among those now presented. It was active rheumatism, and had existed seven weeks; the parts were hot, and the joints were more painful the warmer they were kept, so that the warmth of the bed rendered the pain ten times worse. He had thirty leeches applied to the joints that were in pain, and he took half a drachm of *vinum colchici* three times a day. This man, with this simple treatment, got so well that he went out on the 11th of November, the same day that the woman was presented. There was no deviation in the treatment;

these simple remedies were employed, and he went out perfectly well. I see that just before he went out, the rheumatism, which still remained in a slight degree, changed its character—he had no longer heat. You will find frequently that the character of rheumatism will change; you may lower down the heat, till you have cold rheumatism; and again you may increase it, till you have hot rheumatism. I have seen these forms of rheumatism alternate, and have been obliged to alternate the treatment before the patient was cured.

I need not say, that in those cases where I had recourse to local bleeding, I employed moderate diet—that it is right to feed the patients on slops, or things little better. The French reproach us with employing the most violent remedies in this country, in acute diseases, so that we nearly kill the patients by bleeding them and giving them calomel, and let them all the while eat beef-steaks and drink porter, and do what they like. There may be men so silly—there are men in every business, and in every profession, who do not conduct their concerns in the most judicious manner—but I am confident this is not the case with the great majority of practitioners. The same attention is generally paid to diet in this country as in any other part of the world; but, in detailing our cases, we certainly do often omit to speak of the diet: we take it for granted that it is known we do not give wine and porter; and from this circumstance alone, the French have imbibed the idea that we never attend to diet at all—that we just see the patients, write a prescription, and let them go on as they choose with respect to food. This, I am satisfied, is an unjust observation, if it be made generally; but still there are doubtless some who do not pay as much attention to diet in this country as they should. We may, however, reproach some of the French with carrying restriction in diet too far. I am sure that most persons who have seen patients that have been treated by the French, have every now and then met with instances in which starvation has been carried so far that the patients have been in danger of sinking; but, by allowing them a moderate quantity of animal food, and in the same degree stimulating liquids, they have rapidly rallied, and got well. If we commit one error every now and then, the French commit an opposite error, I will not say every day, but as often as we run to the other extreme. Let those who commit the one fault or the other be blamed; but let us not blame each other generally. Every one should recollect that he does not do his duty, either surgically or medically, unless he lays down rules with respect to diet. There is no great difficulty with respect to these rules. Every one must know that those who write on the digestive organs carry the thing

much too far. It is sufficient to say, that when a person is in an inflammatory state, so as to require bleeding, general or local, or antiphlogistic treatment, that one part of the antiphlogistic treatment should generally consist in low diet, in the cutting off of animal food and stimulating liquors, or they should be taken in the lowest possible degree. But, with respect to articles of diet in general, what is said by Dr. Heberden is perfectly true;—that beyond the general rules of low and moderate diet, and full diet, which every practitioner must be acquainted with, every man knows best what agrees with him, and he can ascertain it as well, if not better, than the doctor. The object of minute rules is often rather to make an impression on the patient than to lay down any specific plan which will do essential good. *Assa vero, an elixa eligenda sint, olerumve utrum utro sit utilis, modo communi judicio non caret, quam alius quilibet, tutius meliusque deprehendet.* There is a difference between low diet, moderate diet, and full diet, and every practitioner should be very attentive to the quantity, and the nutritious and stimulating quality, of the food which the patient is allowed to take. But excessive nicety in directions is too often affected. *Quomodo sanis, quomodo aëgis vivendum sit, medici sæpenumero videntur nimis curiose et subtiliter disputare.*

In my next lecture I will speak of a few other cases which were presented last week.

LONDON HOSPITAL.

Removal of the Superior Maxillary Bone for Osteo-Sarcoma—the External Carotid being previously tied.

GEORGE ROBINSON, aged 43, admitted into the London Hospital, November 2, 1830, with a large osteo-sarcomatous tumor of the right superior maxillary bone, protruding into the antrum, and extending over the whole side of the face, which is so considerably distorted that a line drawn from the external angle of the eye to the corner of the mouth, on the diseased side, measures four inches and three quarters; while, on the healthy side, the distance is only two inches and a half: a line drawn from the ear to the ala of the nose, on the one side, measures six inches and a quarter; while, on the other, it is little more than four inches. The base of the tumor does not extend beyond the mesial line of the palate plate of the superior maxillary bone, but protrudes both above and below, slightly displacing the vomer and nasal cartilages, and extending into the mouth half way across the palate plate of the left superior maxillary bone. There is no vestige of inferior spongy bone on the right side. The membrane of the mouth is slightly ulcerated, arising from the pressure of the teeth of the lower jaw. Some of the molar teeth having fallen out, there is an opening, through which a probe passes into an apparently

hard solid mass. The smell is extremely offensive; and from the size of the tumor preventing the mouth being easily shut, he is unable to masticate, and the saliva is constantly dribbling away.

On admission, the man gave the following account of the disease. That, about four or five years since, he received a blow upon the face from a man's fist; and that shortly afterwards a swelling commenced at the fore part of the superior maxillary bone, without much pain; that this gradually and slowly increased till within the last four months, since which its progress has been more rapid and accompanied with considerable pain; his health was formerly very good, but latterly he has become much weakened.

After his admission into the hospital, the tumor, from being repeatedly examined, became inflamed; and two or three abscesses formed, communicating with the diseased bone—one at the posterior part of the antrum, another on its outside, and a third connected with the orbital plate; and there was considerable discharge from the right nostril. These abscesses were opened, and the man's strength supported by broths and two pints of porter daily.

On Wednesday, the 17th, Mr. John Scott proceeded to remove the whole mass. The man was laid on a table on his left side, with a small pillow under the neck. The first step of the operation was to secure the external carotid; an incision about two inches long was made from below the ear, in an oblique direction down the neck; the parts behind the angle of the jaw were then carefully dissected, and the lower part of the parotid gland cut through; the artery was now felt pulsating at the bottom of the wound; the surrounding parts were separated with a silver knife, and a ligature was carried under the vessel, by means of Weiss's aneurism needle, at the edge of the digastric muscle. Some delay and difficulty in doing this was occasioned by the silk being repeatedly cut through by the needle, the extremity of which broke just as the ligature was carried under the vessel.

The artery being secured, an incision was made from the corner of the mouth to the external angle of the orbit, and another to the internal angle; the coronary artery was secured, and the flap thus formed dissected back; the inferior oblique muscle of the eye, and contents of the orbit, were then separated from their attachments to the bone; the membrane of the mouth was reflected from its outer surface, when the abscess behind the antrum was cut into, and discharged freely; the lip on its anterior part, and the nasal cartilage, were then divided, and the bone cut through with a pair of forceps made for the purpose, just at its junction with the malar bone, into the spheno maxillary fissure; the nasal process was then divided in a similar manner, and, lastly, one of the in-

cisor teeth being previously extracted, the front and palatine portion was separated rather to the right side, in order to avoid injuring the vomer and septum of the nose. The connexions of the bone being thus separated, a curved knife was carried round to the back portion, dividing the soft parts; this being done, the bone was turned down, and removed with great facility. There was but very slight hæmorrhage; no ligatures were applied. The flap of integuments was replaced, and retained in its situation by sutures and strips of adhesive plaister, and the cavity filled with dossils of lint. The man bore the operation well, and after it was over walked from the operating theatre to his bed, and could swallow and articulate just as well as before the operation. He was ordered to take 60 drops of tr. opii immediately, and 20 drops more every half hour till he felt disposed to sleep.

Nov. 18.—He took 140 drops of laudanum, when he went to sleep, and had a good night. His pulse is soft and good, skin moist, and he is free from fever; says he has no pain, and is as well as he can expect to be. Ordered a common enema, 60 drops of laudanum at night, milk, broth, and beef tea.

19th.—Bowels relieved; he is quite as well as yesterday; has passed a good night, and is free from fever; enema and laudanum to be repeated.

20th.—Has passed another good night, and is free from constitutional disturbance; the dressings being removed, the section nearest the nose was found to be perfectly united, and the sutures were removed; that from the malar bone to the angle of the mouth being carried through those parts previously in a state of inflammation, has not adhered at its upper part.

21st.—He has been masticating some pudding. The malar incision is separated rather lower than yesterday, but he is doing as well as possible in all other respects.

The diseased growth was confined to the anterior and inferior part of the right superior maxillary bone; its orbital plate was not involved in it, but was in a great degree destroyed by caries and necrosis, the effects of the subsequent inflammation and suppuration; the antrum communicated with the abscess at its posterior part.

GLASGOW ROYAL INFIRMARY.

*Fractures—Traumatic delirium—Large doses of Prussic Acid.**

In two of the cases of fracture, death took place from that peculiar affection of the nervous system, which has been called traumatic delirium, or delirium tremens.

I.—C. A. aged 45, was admitted on 8th April with a compound fracture of tibia and simple fracture of fibula of right leg, re-

ceived the day before. The wound had bled rather freely; it was about two inches in diameter, and sloughy. The leg was much swollen, and several vesications had formed on different parts of it. His habits were very intemperate; he was intoxicated at the time of the accident, and had continued incoherent since. On admission, the extremities were cold; he was much agitated, his pupils were dilated and eyes suffused; his pulse was 90, of moderate strength. The bowels were freely opened, and he was ordered two grains of opium.

9th.—During the evening became more restless and incoherent. No sleep. At 11 o'clock, p.m. had a draught with 50 drops of prussic acid, ten minutes after which he became calmer, and slept till 5 o'clock morning. Is at present quite sensible, and feels better. Pulse 82, soft. Two stools. Twenty leeches were applied to leg last night, and repeated this morning. Fracture reduced, and leg put up in fracture-box.

Evaporating lotion—opiate at bed-time.

10th.—Soon after visit, delirium returned with increased violence, accompanied with severe tremors. Opium was repeated, but he continued in the same state till near midnight, when he had a draught, with 15 drops of prussic acid. Fell asleep shortly after, and slept for an hour, when he awoke in a state of violent agitation and delirium, and expired suddenly, about 1 o'clock this morning. No inspection.

In this case it was considered improper to amputate until the high state of excitement in which he was had in some measure subsided; and at the visit on the 9th, although he was more collected, the appearance of the leg was such that it was thought advisable to attempt to save it. From his general appearance on the 9th, I certainly did not anticipate the return of the delirium with such violence, although I am aware that this affection, in habitual drunkards, is subject to remissions and exacerbations, and is sometimes very suddenly fatal. In this case, the prussic acid had certainly the effect of procuring sleep, the great object in the treatment of delirium tremens.

II.—Elizabeth P., aged 53, of very intemperate habits, was admitted on 30th Nov. with an oblique fracture of upper third of femur. The limb was put up in splints in the straight position, and she did well until the morning of the 2d Dec., when she had some delirium, and at the visit she was incoherent—her face flushed—pulse feeble, and her manner hurried. She was ordered a grain of opium every two hours, and four ounces of spirits daily. On the 3d and 4th, the symptoms of delirium tremens were well marked. She had the great loquacity, the continual jactitation, always endeavouring to remove the bandages from the limb, the spectral illusions, and the general incoherency of

* Glasgow Medical Journal,

manner usually present in this disease. The opium had been given in doses of two grains, frequently repeated, and she had a drachm of laudanum at bed-time, in the form of enema, but no sleep could be procured. The head was now ordered to be shaved, and it was necessary to put on the strait jacket. The symptoms continued until the 7th, when they gradually abated, and she remained generally calm and collected, although occasionally incoherent, until the 20th Dec., when the same disease again appeared. During this time she had a small quantity of spirits daily, and a grain of opium morning and evening.

22d Dec.—Since last report, has been only occasionally incoherent; but during last two nights was very noisy, and had no sleep. Face at present flushed. Pulse very quick. Bowels freely opened with calomel and jalap. Swelling of thigh subsided, and fracture appears to be doing well.

Symptoms continued to increase during next day, notwithstanding the free use of ammonia, opium, and nourishing food, and she died on the morning of the 24th.

On dissection, the pia mater was found more injected than natural, and the cortical substance of the brain, when cut into, presented numerous bloody points. In each lateral ventricle there was nearly an ounce of serum, and several ounces at the base of the brain. The fracture was found to have taken place in a very oblique direction through the great trochanter. It was comminuted, and the fractured surfaces were slightly displaced. At the lower part osseous union had begun to form. The soft parts around the fracture were of a black colour, from effused blood.

NORTHAMPTON GENERAL HOSPITAL.

Disease of the Kidneys and Bladder.

[Communicated by Mr. J. W. West.]

WM. WILLIS, aged 62, was admitted into the General Hospital, Northampton, on the 2d October, 1830, with symptoms of diseased bladder. About a fortnight previous to his admission found himself unable to void his urine, excepting by drops, which were constantly passing away from him involuntarily; had frequent and severe pain in the region of the kidneys, particularly on the left side, and extending round the lumbar regions. The abdomen was tumid; countenance contracted, betraying extensive visceral disease; bowels generally costive; pulse 62, seldom varying.

His urine was frequently drawn off in the course of the day and night, and the quantity at each period has generally exceeded three pints; it was high coloured, and blended with purulent matter, sometimes intermixed with blood. There was at first some difficulty in passing the catheter, from a supposed enlargement of the prostate

gland. The patient took a variety of medicines, but still gradually got worse, and died November 8th.

The Post-mortem Examination ten hours after death.—On opening the cavity of the abdomen, the viscera presented no very unnatural appearance, excepting the bladder, which was considerably distended, occupying the lower part of the abdomen. On puncturing the capsule of the left kidney a quantity of purulent matter escaped, and the kidney was found much enlarged, and studded with tubercles; in its substance were several large vomica. The right kidney was also considerably enlarged, but its structure not so completely destroyed. Both ureters were thickened and dilated. On opening the bladder a fluid resembling coffee grounds issued out: the mucous coat was found ulcerated, and its muscular coat considerably thickened.

The prostate gland was four times its natural size, and tuberculated.

The other viscera were healthy.

ALDERSGATE-STREET SCHOOL—MR. KING.

To the Editor of the London Medical Gazette.

SIR,

I BEG to inform you that the letter which appeared in your last Number, purporting to be an account of certain proceedings at Aldersgate-Street School, and which bore the signature of "A Friend to Truth and Candour," exhibits a lamentable deficiency of both. The pupils in whose behalf this writer presumes to address you, utterly disavow his interference. They object to the publication in question, for this amongst other reasons—that it is a violation of an honourable understanding; they object to it as a gross distortion of the truth; and above all they repudiate the sort of taste and temper which your correspondent displays. I can hardly doubt that this "Friend of Truth" has superadded the guilt of obliquity of purpose, and dissimulation of character, to the unworthy qualities with which I have otherwise charged him, when I find that all the pupils ascertained to have voted in the majority at the meeting alluded to, have just signed a declaration in which they reprobate and protest against the letter which has produced the present communication.

I am, sir,

Your obedient servant,

The Pupil who moved the Amendment at the Meeting at Aldersgate-Street School.

[We regard the transmission of the former notice without the knowledge of the parties as highly improper, and had we known the circumstances under which it was sent, we should have declined to insert it.—E. G.]

W. WILSON Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A

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OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 4, 1830.

LECTURES

ON

COMPARATIVE ANATOMY,

AS ILLUSTRATIVE OF

GENERAL AND HUMAN PHYSIOLOGY,

*Delivered in the Medical School of
Birmingham,*

By S. LANGSTON PARKER.

LECTURE V.

Of the Seventh and Eighth Pairs of Nerves.

GENTLEMEN,—We arrive this evening at the consideration of the remaining nerves, more immediately connected with the medulla oblongata; these are the auditory and facial, or the portio mollis and portio dura of the seventh pair, and the pneumo-gastric, par vagum, or eighth pair. These nerves are all more intimately inserted or attached to certain eminences, found in the interior of the fourth ventricle, and we must therefore offer some remarks upon this cavity before entering upon the consideration of the nerves which arise from it. The fourth ventricle, possessed by all animals, though more capacious in the lower orders, is situated on the anterior part of the medulla oblongata, and is formed by the divergence of the corpora testiformia; the continuation of the anterior segments and the spinal cord (the corpora pyramidalia) constitute its base or floor, upon which we may remark, in the mammalia and birds, the grey bands, described by the Wenzells, from which the auditory nerves arise. Picholomini considered the medullary striæ on the base of this ventricle, which are generally met with in the brain of the adult, as the roots of the acoustic nerve. When, however, it is considered that these striæ are only met with in man,* it must be

evident that the opinion of Picholomini was erroneous, and the dissections of Prochaska, Gall, the Wenzells, and Cuvier, have sufficiently exposed this error. These anatomists have denied any co-existence between the functions of the acoustic nerve and the striæ in the fourth ventricle, but, as in certain subjects they are evidently connected with the root of this nerve, it is probable that they may exert some accessory power in rendering the sense of hearing more perfect and effective. This proposition derives additional support from the great variation which exists in the auditory sense in man. Serres has recorded the dissection of the brain of a musician, in whom the striæ were remarkably large and numerous. These striæ are not met with in the brain of the fœtus, and thus it has been asserted that children cannot distinguish nice variations of sound till the period when the striæ commence their development.

These striæ are not symmetrical; their number varies on the opposite sides of the ventricle; they are sometimes directed towards the root of the auditory, at others connected with the origin of the fifth and eighth pairs of nerves. Many anatomists consider them to form some obscure and mysterious relation between one or more of the nervous trunks and the centre of the fourth ventricle. This subject is still involved in obscurity, but from the variable disposition of the striæ, in different subjects, it is nearly certain that they confer some additional properties upon the ordinary acoustic sense*.

The fourth ventricle of the pisces and reptilia communicates with the canal of the spinal marrow, and in these classes it can only be considered as a dilatation of this canal, become more capacious at its superior part. This communication is likewise evident in all animals where the canal of the medulla spinalis is met with. Grey striæ may

* The fourth ventricle of man, and the medullary striæ in its interior are represented by Rolando, in the Atlas to the work of Desmoulins and Magendie, pl. 13, fig. 5.

* Wenzel, de structurâ cerebri humani et brutorum.

be observed on the interior of the fourth ventricle, in certain reptilia, which are directed outwards towards the roots of the nerves. In the pisces, the interior of the fourth ventricle presents peculiarities not met with in any other class. In the osseous fishes we find sometimes two, and sometimes four lobes of medullary matter, formed by the doubling of the posterior filaments of the medulla oblongata; these lobes obliterate, or fill up, the cavity of the fourth ventricle. In the conger eel the lobes are double, in the cod their number amounts to four. These lobes coincide with the development of the nerves, which are inserted upon the corresponding part of the medulla oblongata, but more particularly with the fifth, seventh, and eighth pairs. The superior lobe is more immediately connected with the fifth nerve, of which the acoustic in the pisces is but a division; the inferior is the ganglion of the eighth pair, to which this nerve is directly attached*.

The carp is, of all fishes, that in which the lobes of the fifth and eighth pairs of nerves are carried to their greatest development, thus corresponding with the enormous size of the nerves in this fish.

In the cartilaginous fishes the divergence of the posterior cords of the medulla oblongata, or the corpora restiformia, is greater than in the osseous, and the cavity of the fourth ventricle is consequently more capacious. The lateral parietes of the ventricle are folded spirally, and have the appearance of festoons, as in the rays. These lobes correspond also with the great development of the fifth and eighth pairs, distributed to the various parts of the body, and to the electric apparatus of the torpedo.

In the mammalia, the fourth ventricle contains a small bulb of grey matter, which is the *tænia grisea* of the brothers Wenzell †. This body is considered by all the anatomists of the present day to be the ganglion, or nutritive organ, of the portio mollis, or acoustic nerve; its size and development always corresponding with that of the nerve, which derives all its roots from this ganglion of grey matter. On a cursory examination the portio mollis appears to arise from the edge of the trapezoid body in the mammalia, or from the pons varolii in man; but this appearance is deceptive, its true origin being concealed by the fibres of the pons and trapezoid body, in the same way we explained the fifth to be in our last lecture. The true insertion of the roots of this nerve will be distinctly seen by boiling the fresh brain in oil, when they may be dissected to their ultimate fibres. Thus the portio mollis of the seventh pair, or more properly the acoustic

nerve, is of great size in the fishes, and is connected to a distinct lobe on the parietes of the fourth ventricle; but in these animals this nerve is not a division of the seventh, but of the fifth pair. This is most evident in the rays. In the mammalia this nerve is immediately connected with the grey body in the interior of the fourth ventricle, this body being the ganglion, or nutritive organ, of the acoustic nerve. The portio mollis and portio dura of the seventh pair, are then nerves distinct in their origin and functions, and it is an error to describe or consider them as two branches from the same trunk, their origins or connexions to the central system being merely contiguous. The distribution of the acoustic nerve we shall consider when speaking of the sense of Hearing.

The facial nerve, or portio dura of the seventh pair, has been considered by anatomists generally to be a nervous trunk, arising together with the acoustic, or portio mollis. Many facts, however, militate against this opinion, and it is much better to consider the portio dura as a distinct nerve, under the denomination of the facial, or the respiratory nerve of the face, according to the system of Mr. Charles Bell. A cursory account of its origin and distribution in man and animals is necessary to understand perfectly its physiology, or the functions over which it presides. The origin or attachment of the portio dura to the medulla oblongata in the mammalia, is always distinct from the auditory nerve. It apparently arises from the extremity of the trapezoid body between this part and the pons varolii, but its true insertion may be traced before this body is formed into the space intervening between the corpora olivaria and restiformia. This, it will be recollected, is the track and the origin of all the respiratory nerves termed by Mr. Bell the *tractus respiratorius*. In man the root of the nerve is covered by the external fibres of the pons. In the lowest mammalia, where the trapezoid body and pons are no longer met with, the portio dura may be seen directly attached to the medulla oblongata, on the trajet of the *tractus motorius*. This nerve is found in all the mammalia, without exception, but its volume does not correspond with that of the acoustic nerve, the latter being always developed in a direct ratio with the sense of hearing; the former always bearing strict accordance with the extent of the respiratory motion in the face—that motion which is connected more immediately with the varied expression of the passions. Emerging from the stylo-mastoid foramen, this nerve spreads its fibres over the whole surface of the face, and it might be supposed that as the nerve is exclusively destined for this part, that it should be developed in strict proportion with the size of the organ it had to supply. The volume of the face goes progressively increasing from

* Representations of the fourth ventricle, and its lobes, in the pisces and reptilia, will be found in Serres and Desmoulins, op. cit.

† Wenzell, op. cit. p. 183.

man to the quadrumana, carnivora, ruminantia, and rodentia, to the reptilia and pisces. But in studying those parts of the face to which this nerve is distributed, which are chiefly the muscles of the forehead, cheeks, and lips, we shall find that the increased size of the face does not correspond to these parts: we see that the development of the face in animals is principally owing to the increased size of those parts which form the protecting organs of the senses, or are accessory to their perfection of action;—such are, the extent of the nasal fossæ, the æthmoidal cells, the maxillary sinus, or antrum highmorianum, the vault of the palate, and the cavity of the mouth. We see also, from this cause, that the orbital cavity is considerably enlarged and extended. The size and length of the face depends, then, on the progressive enlargement of the olfactory and gustatory chambers, together with that of vision, this development being rather interior than exterior. It is from this cause likewise that the special nerves of sight, smell, and taste, have a direct development with that of the face, whilst the parts to which the portio dura is distributed are not augmented by the increase of the face, since this depends upon that of the organs of the senses; the organs receiving branches from this nerve being decreased and not augmented as we descend from man to animals. The development of the portio dura directly corresponds with that of the muscular action of the face, as displayed by this part in its consent with the actions of the thorax in the expression of the passions; this development being at its maximum in man, and decreasing as we descend the scale.

In birds the movements of the face are actually destroyed, and no muscular structure is to be found, except that for the motion of the mandibles. In them the facial nerve exists, but is extremely thin; its branches can with difficulty be followed, though the trunk is always to be met with. Its disposition is similar in the reptiles, the face being merely a bony cuirass, the mouth occupying nearly all its proportion, and its mobility and sensibility reduced to a state of atrophy.

In the pisces the portio dura is connected with the fifth and eighth pairs, not appearing to be distinct from these nerves; it passes into the ear with the trunk of the fifth pair, which is here the auditory nerve, and piercing the bone, is distributed to the muscles of the operculum, or sell lid, which in this class is the mechanical agent of respiration—it may be termed the thorax of the pisces*.

* The portio dura is developed in a direct ratio with the number and complexity of those muscles subservient to the expression of character and feeling. These expressions are most variable and extensive in man, and the muscles of the human face are also the most numerous and complex; the portio dura, corresponding with this

The direct experiments of Bell and Magendie prove, without contradiction, the functions of this nerve, which are, as we have said, respiratory. Mr. Bell describes this nerve as the respiratory nerve of the face: he says, “that the motions of the lips, nostrils, and the velum palati, are governed by its influence, (the latter by its communications with the bidian in the aqueduct of Fallopius,) when the muscles of these parts are in associated action with the other organs of respiration. These passages to the lungs are membranous tubes, moved by muscles, which serve to expand and widen them, so that the air may freely pass into the lungs. It is obvious that to produce this these muscles must have a consent with the other muscles of respiration, and move simultaneously with them, and this is effected through the respiratory nerve of the face*.” This nerve likewise presides over the actions of sneezing, coughing, smiling, and the various expressions of the face. The actions of the face of the monkey were destroyed by Mr. Bell by division of this nerve. Its trunk on one side was injured by suppuration in a patient, who consequently remained paralytic on the same side in the actions of smiling and sneezing. A coachman from whom Mr. B. removed a tumor, situated before the ear, could no longer whistle his horses, as the branch of the portio dura going to the lips was cut away. These experiments and facts prove directly what comparative anatomy proves by induction. We have seen the portio dura enormously developed in man, where the expression of the passions and the respiratory actions of the face are most numerous and effective. We have seen, on the contrary, the nerve atrophied in the reptilia and aves, where the face is reduced to a bony or cartilaginous cuirass, and its respiratory actions null. In the pisces we have likewise traced the distribution of this nerve in the mechanical respiratory actions of the

disposition, is here at its maximum of development. The quadrumana, or monkeys, are but little inferior to man in these structures, and the portio dura is nearly as voluminous in them as in the human subject. The carnivora present us with the next grade of muscular and nervous development in the face as expressive of passion and character. The herbivora succeed these, and below them the muscular development of the face becomes rudimentary, those muscles still remaining which serve for prehension and mastication; such are, the masseter, temporal, buccinator, and pterygoid; and by examining the skulls of animals we shall instantly remark how the bony surface for the attachment of these muscles is increased. In the remaining three classes the muscles supplied by the seventh pair are no longer met with; these are chiefly the occipito-frontalis, zygomatici, levatores labii superioris atque nasi, the levator and depressor anguli oris, and the superciliary muscles, to which may be added a few others; the action of the whole of these being limited to the expression of passion or character.

† Philosophical Transactions, 1822.

operculum. Thus the nerve and the respiratory functions of the face appear and disappear together; induction and experiment going hand in hand to elucidate the functions of this interesting and important nerve.

We now come to speak of the eighth pair of nerves, which are the great chemical agents of the process of respiration. In examining the anatomy and physiology of this nerve, we shall prove, from comparative anatomy, what Mr. Bell proved by direct experiment and observation upon man, viz. that the eighth nerve is the chemical agent of respiration, whilst the remaining ones of this system are concerned in the mechanical process only. I shall find it necessary, in considering the physiology of the eighth pair, to make a few cursory remarks on the organs of respiration in the series of animals, as the properties of the nerve will, by these means, be much better understood.

In the first place, the eighth pair of nerves always coincides in volume with the density of the medium in which the animal respire, and the extent of surface over which the blood is distributed, to be placed in contact with the oxygen contained in the air or in the water. The eighth nerve, in the class pisces, arises or is connected to the medulla oblongata at its junction with the medulla spinalis, the termination of the roots of this nerve being the limits of the extent of that portion of the brain, (as established by Flourens*.) In those fishes which inhabit deep waters, or live and feed in the mud at the bottom of pools or rivers, the part of the medulla oblongata to which the nerve is attached is provided with a large medullary lobe, equal or superior to the size of the other ganglia of the brain; and the nerves arising from this lobe are of enormous size. This disposition is well exemplified in the carp. In a fish of this kind, a foot long, the eighth pair of nerves equal in size the same parts in man. The first division of the eighth nerve in the pisces is distributed to the gills, two branches, a small and a large one, supplying each of these organs; the filaments of which are proportionally smaller as the fish inhabits waters which are purer and more agitated, and which consequently contain a greater quantity of air: they are small if the habits of the fish lead him to swim and feed near the surface, or to live in rivers provided with numerous streams. On the contrary, in those species which inhabit stagnant pools and the sea, at a great depth from the surface, the branches of the nerve distributed to the gill are always more voluminous. Let us inquire for a moment into the cause of this variation of the respiratory branches of the eighth pair in the pisces, and we shall

find that their disposition will throw some important light upon the true physiological actions of this nerve. The fish breathes in the densest medium; and, coinciding with this, he is provided with the greatest degree of respiratory nervous influence, by which he is enabled to carry on that chemical absorption of oxygen from the surrounding medium, necessary for his existence. Were these animals provided with the same proportion only of nervous power as the mammalia and birds, they must inevitably perish, since this would not be sufficient, in a fluid so dense as water, to effect a sufficient combination of oxygen for the necessary change in the circulating fluid. The respiratory nerve of the fish has to separate the oxygen from the water, and when this is accomplished it has still left the same process to perform as that undergone by the mammalia and birds, viz. to effect that chemical change in the blood, whatever it be, which enables it to support and nourish the animal. Animals, dwelling on the earth and in the air, meet with the oxygen free, and mere contact is sufficient to accomplish the process; a smaller degree of nervous power or influence is consequently required. This is illustrated in the variations of the volume of the nerve in different species of fish, it being smaller where the oxygen is in greater quantity, or less intimately combined, as in rivers or toward the surface of the water; the nervous influence here required being less than in the mud and in the deeps, where the individuals inhabiting these parts are always provided with the most voluminous nerves. The volume of the respiratory branches of the eighth pair is always larger as the surface to which the oxygen is applied is smaller: this is particularly the case in the pisces, and is an additional demand for an increased quantity of respiratory nervous influence.

The second division of the eighth pair in the pisces, as in all other animals, supplies the stomach, œsophagus, and pharynx.

The third division is peculiar to this class; it is a single or double nervous trunk, traversing the whole length of the lateral line of the body, terminating at the tail, and supposed to confer a respiratory power upon the skin (as accessory to the true bronchial or pulmonary respiration) similar to that possessed by certain reptiles, according to the researches of Edwards*. The volume of the eighth pair is much more developed in the aquatic than in the terrestrial orders of other animals, as the cetacea among the mammalia, and the turtles among the reptilia; plainly shewing that the medium in which these animals live requires a respiratory action of greater power for the

* *Recherches experimentales sur les fonctions du système nerveux.* Paris, 1824.

* W. F. Edwards, *De l'Influence des Agens Physiques sur la Vie*: Paris, 1824.

oxygenation of the blood, and the organ appropriated to this function is the respiratory portion of the eighth pair of nerves.

In the reptilia, it will be recollected that the lungs are large vesicular pouches, divided by septa into membranous cells of great capacity. These lungs, when inflated to their maximum, descend, distend, and nearly fill the cavity of the abdomen. In the fish we saw that a great, even an overwhelming proportion of nervous energy, was necessary to elaborate a small proportion of oxygen, as this element was not free in the medium they respired. In the reptile we find the cellular lungs of great capacity; the proportion of atmospheric air admitted must be great; and as this class does not demand a large proportion of oxygen to depreciate the blood, which here is deficient in activity of circulation and temperature, a small proportion of nervous energy is sufficient, the respiratory branches of the par vagum being, in the reptilia, reduced to their minimum of existence, and smaller in this than in any other class. Here we have, again, the proportion of nerve strictly allied to the power of the respiratory action, and the quantity of oxygen demanded. The remaining branches are distributed to the heart, the oesophagus, and the stomach.

The respiratory apparatus of birds presents us with a number of peculiarities not found in any other class. We shall notice them so far only as to illustrate the function of the respiratory divisions of the eighth pair of nerves, leaving their minor points to a subsequent period. The true lungs of birds are small, and placed in the interstices of the ribs, presenting nothing in their organization very different from these parts in the mammalia. The cavities of the thorax and abdomen are, however, divided into numerous large membranous cavities, (by doublings of the peritoneum,) communicating by foramina with the lungs themselves, from which the air is distributed, in inspiration, to the whole of these internal cavities; and this is not all. Most of the bones of birds, especially the accipitres, or birds of prey, are destitute, in their adult state, of marrow, and contain air, which is admitted by foramina communicating with the lungs, trachea, the mouth, and the nostrils—the long bones, as the clavicle, humerus, and femur, being nothing but osseous cylinders containing air. The sternum, the ossa innominata, and dorsal vertebrae, are likewise destitute of marrow, and the plates merely occupied by transverse bony septa. Thus we have the atmospheric air admitted through the trachea and lungs to the air cells and the thorax, abdomen, and other parts of the body, to the cylindrical and flat bones, the bird immediately after an inspiration being literally

filled with air. It would naturally be expected that from so great a quantity of air pervading the bodies of these animals, that an accompanying proportion of nervous influence would be required, in order to elaborate that great proportion of oxygen which the bird so especially needs. We hasten to shew you why it is not so.

With regard to the development of the eighth pair in birds, says Serres, I have not discovered that its volume at all corresponds with the extent of the organs of respiration. And he then inquires whether the difference between the function and the nerve results from the disposition of the mechanical organs for the performance of this process? Though Serres never answered the question, he must have been aware of the true cause of the atrophy of the nerve when he proposed it. The volume of the respiratory filaments of the eighth pair in birds hardly exceeds their development in the reptilia, where the lung is, as we saw, a mere membranous pouch. It will be recollected that the bird inhabits the rarest medium, and chiefly respire in those regions where the proportion of oxygen in the atmosphere is most abundant: and again, the air being admitted to nearly the whole of the body, the blood is in immediate contact with it at a many more points than in the other classes, where this contact only takes place in the gill or lung. Thus we have a greater quantity of oxygen in the air admitted, and this fluid is in contact with the blood in other parts of the body beside the lungs, the respiratory surface being increased threefold or upwards. Here we have the reason of the atrophy of the nerve explained, the multiplicity of places of contact between the blood and atmosphere superseding the necessity of much nervous power to extract that proportion necessary to the animal: the increase of oxygen, also, being taken into consideration, will place this opinion in a still clearer light. We saw the pisces with a voluminous nerve in a dense medium, the difficulty of the separation of oxygen from the water being great, and requiring great nervous power. In the bird, on the contrary, we have the oxygen free, admitted to a great extent of surface, and the nervous filaments few and small, as the power required for the elaboration of the oxygen is here likewise feeble, the points of contact being numerous, and the quantity of gas proportionably great.

In the mammalia, it has been stated by Mr. Bell that the par vagum arises in the fissure between the corpus olivare and corpus testiforme. This will be found correct in man, but false with regard to the mammalia generally, where, as the corpus olivare diminishes, (and it will be recollected we found it at its maximum in man,) the eighth pair is inserted more and more unequivocally

on the body of the corpus testiforme. This slip of nervous matter, described by Mr. Bell, cannot consequently confer any respiratory function upon this order of nerves, since their position varies in different animals; and this fact establishes still more the physiological fact we proposed in our last lecture,—viz. that the nerves are not dependent for their diversity of action on the part of the central system upon which they are inserted, but upon the functions of the organs in which they are found. The volume of the lung, in the mammalia, holds a medium rank between this organ in the reptilia and birds; the atmospheric air is not admitted to such an extent of surface as in the latter, and consequently a greater degree of nervous influence is required to elaborate it—the proportion of oxygen required in the quadruped not being so great as that necessary for the bird.

Let us review the relations existing between the nerve, the respiratory organ, and the medium respired, and the quantity of oxygen necessary in the four classes; for all these must be noticed, to understand clearly the property of the eighth nerve.

The respiratory branches of the eighth pair, of fish, are the most voluminous of all the classes: the medium respired is water, the proportion of oxygen combined smaller than in the atmosphere, and the respiratory organ small.

In reptiles the lung is large, the quantity of oxygen required, small, and the nerve also diminutive.

In birds the respiratory surface is immense, the proportion of oxygen demanded, great, and the nerve small.

The mammalia hold a middle rank between the two last mentioned orders.

We have now clearly pointed out the legitimate function of the respiratory portion of the eighth nerve,—viz. that it is the sole chemical agent of respiration. It is through the medium of this nerve that the blood is deprived of its carbon, and by which oxygen is substituted for it. The nerve is always voluminous when the oxygen is combined intimately with another fluid, and powerful chemical means are necessary to separate it; and where, in addition to this, the quantity of the gas admitted to the respiratory surface is but small. This is the case in the pisces, where the brain, or rather medulla oblongata, has a distinct ganglion for the eighth pair, which exceeds even the volume of the other portions of the brain. The nerve is then a true chemical agent, separating the oxygen from the inspired air or water, and combining it, in a manner we are utterly ignorant of, with the blood. The other respiratory nerves, though placed in the same system by Mr. Bell, are totally different from the one which we have been considering, in the phenomena over which they preside. The fourth and seventh nerves may be termed accessory to the respiratory system—they may be atrophied, or

banished from the economy, without any injury to its functions. The phrenic, the spinal accessory, and external respiratory, distributed to the serratus magnus, are the mechanical agents of the process, and without their agency the chest could not be dilated, to admit the air, and submit it to the chemical agency of the eighth or par vagum nerve. The mechanical agents may vary, or other nerves may be substituted for their performance. The thorax of frogs and turtles is immovable, and the mechanical agents of respiration are the muscles of the glottis, supplied by the fifth pair. The fifth pair, distributed to the muscles of the operculum, or thorax of fish, becomes a mechanical nerve of respiration. The function of the eighth nerve never varies; it is always distributed to the same organs, varies as they vary, and is atrophied or augmented as the respiratory functions are more feeble or energetic. Division of the par vagum, on both sides of the neck, soon produces death from asphyxia;* the section of any mechanical agent of respiration brings on more or less difficulty of breathing, as the function of the nerve divided is more or less important. The functions of this nerve throw some light upon the physiology of the system generally. It has been asserted, and with great appearance of reason, that the nerves circulate a fluid analogous in its actions to those of the galvanic. We find the eighth pair to be provided with a distinct galvanic power,—viz. that of separating the elements of which water is composed, or abstracting from the water a certain proportion of oxygen, to combine it with the circulating food in the class pisces. This is likewise the property of the nerve in animals respiring air. Divide the nerve in any of these animals, and what follows?—no change takes place in the properties of blood, no carbon is given off, and no oxygen is absorbed; a black blooded circulation is established, which soon, in the birds and mammalia, destroys life. Re-establish the continuity of the nerve by a galvanic chain, and you will see the blood gradually resume its florid appearance and the true arterial character. This property of the nerve is as well proved from its comparative anatomy as from direct experiment in any warm-blooded animal, since we have seen its volume greatest where the most powerful chemical means were necessary to separate the oxygen from that element with which it was most intimately combined, and its filaments, on the contrary, small, where the greatest quantity of air was admitted, and the proportion of oxygen in that air greatest.

* In this experiment the nerve must be divided below the origin of the recurrent, or inferior laryngeal branches. If this be not attended to, the animal immediately expires, from the closing of the glottis by the constrictor muscles; the action of the dilator muscles being paralysed by the division of the nerve (the inferior laryngeal) which supplies them.

ANALYSES & NOTICES OF BOOKS.

“ L'Auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

Cases illustrative of the Efficacy of various Medicines administered by Inhalation, in Pulmonary Consumption; in certain Morbid States of the Trachea and Bronchial Tubes, attended with distressing Cough; and in Asthma. By SIR CHARLES SCUDAMORE, M.D. F.R.S. &c. &c.

NOTHING can be more attractive at the present moment than the title of this little volume: the words “inhalation in pulmonary consumption,” so prominently set forth upon the title page, reminded us at once of St. John Long and his recent practices; and the thought struck us that possibly this was some new work of his—a sequel to his first literary performance, which we had not long ago the pleasure of dissecting and analyzing, and which the present volume strongly resembles in shape, size, and structure. We were undeceived, however, upon close inspection: we found that it was not written by that quack, but by Dr. Sir Charles Scudamore. The name of Sir Charles is backed by a number of titles, as if for the purpose of securing him from the imputation of being irregularly connected with the profession, which the contents of the book might certainly lead one to suppose. That it will answer this purpose fully, and perfectly satisfy a certain class of readers, we have no doubt; but we fear some disagreeable fastidious critics will not allow the learned knight's tail to escape so easily. We ourselves are not a little surprised and puzzled at *one* sobriquet which precedes the ordinary and extraordinary titles in the list: we never heard before of such a personage as an “Honorary Member of Trinity College, Dublin;” and we cannot help being sceptical enough to doubt whether Sir Charles Scudamore has any right whatever to such a title. In the University of Dublin there are *no* honorary memberships, nor is the term *member* ever applied to any one connected with it—graduate or undergraduate, fellow or professor. Knocking off then the first and nearest joint of the tail, the rest of it naturally falls as matter of

course, nor can any one set the least value upon the suspected and condemned member.

In our necessarily brief notice of this book, we have taken so much notice of the title-page, because it is really remarkable. It is not every medical man that would just now venture to publish a treatise in praise and support of the inhaling system; but Sir Charles chooses his company—he knows which way the trade winds set—and he suits his commodity to his customers. The inhaling in Harley-street, we know, was a favourite and much-patronized process; that in Wimpole-street we have no doubt is got up upon a scale of equal attraction, while it has this obvious advantage over the former, that it is not quite so mysterious, and is administered by an absolute M.D. We say not quite so mysterious, for the Wimpole street process has *some* mystery most assuredly in it. Sir Charles employs a lotion—a counter-irritant embrocation—as well as Long, and attaches as much importance to it; but he tells us what this lotion is composed of (1 vinegar, 1 Eau de Cologne, and 2 water); his inhaling process, however, he leaves in a most delectable state of obscurity. Iodine, indeed, he informs us is the substance that forms the staple of his inhalation.

“I employed a preparation of it miscible with hot water, so as to remain in permanent solution, using for the purpose of inhalation a *glass apparatus*, well fitted in its construction for the exhibition of the remedy in the form of vapour.”

The “glass apparatus,” of course, may be had or used on application at No. 6, Wimpole-street.

It is not a little curious to observe any person at this time of day setting up claims to be considered as an original suggestor of the inhalation of iodine; yet so it is, as Sir Charles explains it in his preface:—

“When I commenced my investigation of the powers of iodine, used in the way of inhalation, I had never heard a suggestion on the subject; and, in regard to most of the other medicines, except chlorine, I am not aware that they have, up to the present moment, been employed in this manner by any other individual.”

Yet at a subsequent page we read this passage:—

"Dr. Murray, of Belfast, has lately recommended*, as a mode of treatment, the introduction of iodine, diffused through warm aqueous vapour, into the atmosphere of the apartment, and he extols its effects; yet how infinitely more valuable, as being certain, definite, and perfectly manageable, must be the direct inspiration of the iodine vapour from a tubular glass apparatus, administered in precise and graduated doses, either separately or combined with other efficacious substances, according to the judgment of the practitioner in the particular circumstances of the case."

Here we have an admission of a certain prior claim†, and another broad allusion to a certain "tubular glass apparatus," the superior value of which is set forth as indisputable; but all this time we have no distinct information concerning the form or mode of applying this invaluable machine. Still further on we are informed that Dr. Scudamore's inhaling process "requires careful attention and management. The composition of an inhaling mixture, and the doses to be used, are to be adapted to the particular case, and changed according to its varying circumstances, in the same manner as we find it necessary and proper to alter and accommodate our treatment with internal medicines.

"For this reason, therefore, and from an apprehension that patients themselves might be tempted to undertake the treatment of their own cases, with the great risk of receiving injury instead of benefit, I have avoided the introduction of formulæ of the remedies for inhaling, although I have, on every occasion, mentioned them in a general manner."

Nor do the subsequent hints to the professional reader tend in any degree to remove our impression of the quackery of the case: the inhaling apparatus of Sir Charles may, for aught we know, resemble the "cabinet pianos" of St. John Long.

Observations on the Structure and Diseases of the Testis. By SIR ASTLEY COOPER, Bart. F.R.S. Sergeant Surgeon to the King, &c. &c. PART II.

(Second Article.)

So early as our number for May 1, we called the attention of our professional brethren to this splendid and valuable work, then just issued from the press. On that occasion we offered some remarks on the plates, and ventured on some criticisms on Sir Astley's nomenclature. We take shame to ourselves for not having sooner made our readers acquainted with some of the numerous important practical points of the work, and have now to supply our former omission.

The division of diseases of the testicle, adopted in the work before us, is very simple: namely—into those which result from *common inflammation*, whether acute or chronic; into those which are *specific*, but not malignant; and lastly, into those which are both *specific and malignant*. Entering a little more into detail, the catalogue of diseases would stand thus:—inflammation and its consequences, among which must be enumerated, wasting of the gland; specific actions, not of a malignant nature; hydatid, or encysted disease; irritable testicle; the mumps affecting the testes; the formation of bone; solid tumors of the epididymis or testicle; the scrofulous; the venereal—which, as Sir Astley observes, some may doubt—fungoid and schirrous diseases, they being specific and malignant. While, in addition to these, we have the diseases of the tunics and spermatic cord; hydrocele; hematocele, and variocoele. The body of the testicle, it is observed, is less prone to disease than the gland of the breast; but its tunics, and the cord, are much more so. Again, the diseases of the breast are frequently uncontrollable, and often require to be extirpated; whereas those of the testicle "generally" yield to treatment. "How often," says Sir Astley, "have I heard patients exclaim, 'Sir, my testicle, which was condemned for operation last year, is now quite well.'"

In a work so comprehensive as that before us, there is of course much to be found that is familiar to all; but there is also much of curious and original matter, and it is to this that we shall limit our analysis.

* A Treatise on Animal Heat, &c.

† See our account of Dr. Murray's book, Med. Gaz. vol. vi.

Inflammation of the Testicle.—The most frequent cause of this is irritation in the canal of the urethra. Naturally connected in their healthy functions, these parts quickly sympathise in disease; yet there are some portions of the canal with which this influence over the testicle is more apparent than as regards others: thus disease of the prostatic and membranous portions of the urethra much more frequently cause inflammation of the testis than when situated in the first six inches of the canal. On this principle is explained the circumstance of inflammation of the testicle so seldom supervening at the commencement of gonorrhœa.

“In the early stages of gonorrhœa, inflammation of the testicle rarely occurs; but when ten days to three weeks have elapsed, it frequently happens; and the reason for this, which has been found upon dissection, is as follows. A person, executed at the Old Bailey, was brought into the theatre of Surgeons’ Hall, as a subject for the lectures; and this man had a gonorrhœa at the time of his death; and when his urethra was cut open, although the inflammation was greatest in the first three inches of the canal, yet the lining membrane was inflamed to the membranous portion of the urethra; and even blood had been extravasated under its mucous membrane. The *veru montanum*, the termination of the duct of the *vesiculæ seminales*, and the *vasa deferentia* in the urethra, thus become irritated, and the inflammation extends along the interior of the canal by continued sympathy. But although the sympathy is the strongest, and the communication most ready, between the testis and the membranous and prostatic portions, yet irritation in the beginning of the urethra will produce it; for I have seen cold water injected into the urethra bring on a swelling of the testicle.”

Astringent and stimulating injections are well known to produce this effect; and hence, if they be employed, the patient ought to be directed to press the urethra about two inches from the orifice, to prevent its farther penetration. The injudicious introduction of bougies, the use of caustic, &c., are analogous in their effects to the preceding; and the use of soothing treatment in such cases is strongly insisted on. Among the consequences of inflammation the most remarkable is the wasting of the testicle;

and perhaps a blow upon the part is the most frequent exciting cause of it, though sometimes the preceding inflammation comes on spontaneously: it is rarely the result of gonorrhœa. When this kind of wasting has once commenced it often proceeds to such an extent that the gland seems to be nearly or altogether removed.

“Mr. S. at the age of nineteen years, received a blow on the testes, from being thrown on the pommel of a saddle. In the evening of that day, eleven hours after, he was seized with excruciating pain in one testis, which swelled to a great bulk in a week; then the inflammation and swelling began to subside; but its decrease did not stop at the natural size of the testis, but the absorption proceeded until the gland was removed. The spermatic cord was much smaller on the diseased side than the other. The vas deferens could be perceived, but it was much less than natural. A small portion of the epididymis could be felt, but the testis was not larger than a pea when swollen by moisture. It was sensitive, but less so than on the healthy side. His constitution was scrofulous, for he had indolent enlargements of the glands of the neck. His virile powers, from his account, were not diminished.”

Of *chronic inflammation* one of the most important consequences is the granular swelling which sometimes follows abscess. Granulations arise from the cavity, are confined and compressed by the unyielding nature of the tunica albuginea, protrude through the opening, and form a swelling, which has often been mistaken for cancer or fungus, but which has nothing malignant in its nature; the skin, however, cannot heal over these granulations, which must by some means be kept down. Astringent applications sometimes succeed; and among these the author speaks favourably of powdered alum sprinkled over the part. Excision is also frequently adopted; and Sir Astley has several times succeeded by passing two ligatures through the edges of the skin, at the circumference of the swelling, and carrying them through its basis; then cutting off the granulations even with the scrotum, and bringing the edges of the skin over the new surface.

The *irritable testis* is a curious and distressing complaint, which often proves very intractable. Unnatura-

sensibility comes on at some part of the gland, or of the epididymis; and this increases till it becomes intolerable, obliging the patient to remain in the recumbent posture, and to avoid the slightest touch of the part, or the gentlest motion. This condition, in a greater or less degree, may last for several years. This part of the subject is illustrated by some curious and interesting letters, addressed to their professional attendants by the patients themselves; and as they elucidate the disease better than any general description, we shall extract two of them.

"Since I had the pleasure of seeing you, I have still continued to maintain an alternative state of amendment and relapse, such indeed as has existed for the last eight months.

"For the last eight or ten days I think I have enjoyed more comparative ease than I have done for the same length of time, perhaps during any period of my very protracted illness; and this I attribute to the almost constant application in the daytime of a bladder containing a solution of nitre in cold water, holding likewise an additional quantity of the salt dissolved. I have applied about eighteen leeches once every week, and sometimes twice, and almost uniformly with benefit.

"The last bleeding happened on Thursday se'nnight, and I was pretty easy next day, and on Saturday, till four o'clock, p.m. when the pain, heat, &c. came on with increasing violence, and in such a way as I have formerly observed, and it continued for some time with undiminishing severity. I thought then of the bladder with nitre, and had recourse to it, with consecutive benefit, in the course of from a quarter to half an hour. My idea is that the cold is kept up by the solution of the salt going on in the water, when in contact with the side. There is evidently less swelling in the iliac region, and the pain has been much less there than in the small of the back. I am still sensible, however, of considerable fulness in the site of the blow, that is, when the spermatic cord crosses the pubis, where likewise I have much pain whenever the testis is not properly supported, or when it is accidentally moved in any way. The testis is likewise tender to the touch, especially towards the epididymis, and between the latter and the seat of the injury just mentioned; but I am not

sensible of the pain extending to the testis. Anxious as you will easily suppose I am to get to business again, I have been trying for some days to walk a few yards in the garden. I am sorry to say I cannot do it without adding to my suffering; but on coming in, I immediately lay myself on the sofa, and have the cold applied, and thus the increased pain sooner abates than it formerly did, when similarly affected. I keep my bowels regular; I continue the cold hip-bath; but durst not venture on the hydrarg. cum cret. you kindly suggested, which otherwise I think I might have taken with advantage. My general health and appetite remain good. I have an intention of applying some leeches again some of these days, and following it up immediately with cold.

"I am, my dear friend, becoming very anxious to get on foot again. I am better, upon the whole, than I was when you were with me; but, after so many irksome disappointments, dare not indulge a too fond or flattering anticipation. I cannot but look at the period as yet far distant when I am to be well, if ever that period will arrive: I shall, however, wait with all the patience I can command, and hope that things may turn out even better than my expectations." * * *

"I will now state to you some further observations of my own, in addition to what you already know. I think I can trace back the origin of my disease to the spring of 1817, about eight or nine months before I married (in the beginning of 1818.) I at that time, 1817, lived too well, grew very corpulent and bloated, took little exercise, and did not cohabit with women during the above eight or nine months, as I had previously been in the habit of doing when on shore. Before the complaint began, I had, during my hours of rest, violent erections; so much so, that I felt the testicle and the vessels now complained of, as if ready to burst, until I got up and walked about for some time, when the uneasiness subsided. Soon after I married, I began to feel the symptoms you are acquainted with; and in a few months I became so uneasy as to cause even some trifling pain when discharging the testicle; till at last it grew so very bad as to greatly alarm me, and I was under the necessity of going to London for advice.

"From the period of my return home

in June last, until about a month ago, I gradually improved, not having used the testicle for the three previous months to October. About three weeks ago I used it, which seemed to relieve it; but it caused a trifling tenderness, and an additional swelling of the testicle for three or four following days. About eight days since I again used it, hoping at the time I should be able to continue doing so; but in this I was disappointed, for on the first day it felt tender, and increased in size; second and third days still more so, with considerable uneasiness; so that, to my mind, using it clearly irritates it, so as to cause the swelling above alluded to: and the upper and outer part of the testicle, and vessels attached to it, become very sore, even when slightly touched with the point of my finger. As the swelling diminishes (after using the testicle,) the tenderness to the touch in a great measure subsides."

Sir Astley Cooper has been compelled, in three instances, to remove irritable testicles at the urgent entreaty of the patients; these he afterwards carefully examined, and found nothing whatever different from the natural appearances. Quina, steel, and narcotics, are the principal remedies.

"It is generally my plan," says Sir Astley, "in this disease, to begin by giving calomel and opium, even to a degree to slightly affect the salivary glands, and to excite all the secretions; and to these the decoctum sarsaparillæ compositum is to be added, as it has some power in diminishing the irritability of the system. I apply a blister to the groin, and procure a discharge from it by the ung. hydr. et ceratum sabinae combined, in equal quantities; and to the testicle itself an evaporating lotion of diluted spirits of wine and æther, or of the nitrate of potash with muriate of ammonia."

The testicle sometimes becomes inflamed in cynanche parotidea; and when this occurs our author regards it as a "specific" disease, little disposed either to suppuration or adhesion. It generally occurs about the age of puberty, seldom under it. Sir Astley has not known the testicle waste in consequence of this affection.

We pass by the chapters on the hydatid or encysted disease, as well as that on scrofulous inflammation of the testicle; for although they contain much

good matter, yet it is not of a kind to suit our purpose. This brings us to "*venereal inflammation of the testis*," a subject more open to difference of opinion: we shall extract what Sir Astley has said on this subject, and follow up his general observations by some cases. In selecting the latter we are guided merely by a desire to show the kind of cases on which the author's opinions are founded; to us the grounds do not appear very satisfactory.

"There are some persons, however, who believe that the testicle is insusceptible of the venereal influence, and who smile at the idea of mercury being necessary for its cure; yet I have seen this organ so frequently enlarged during the existence of secondary symptoms of syphilis, more especially in combination with a cutaneous and periosteal venereal affection, and have observed it additionally swollen and painful in the evening, although relieved by the recumbent posture in bed, and known it yield so easily and readily to the influence of mercury, and just in proportion to the disappearance of the venereal symptoms, that I think it quite unreasonable to doubt its liability to be affected by the venereal poison.

"The swelling of the testicle which occurs in gonorrhœa has nothing venereal in its nature, nor is the constitutional influence of mercury necessary to its cure; but the gonorrhœal and the syphilitic poisons differ in their nature, and in the effects which they produce; and the swelling of the testicle in gonorrhœa is sympathetic only.

"When the venereal poison affects the testicle, it probably attacks the tendinous structure—for example, the tunica albuginea, and from thence extends into its interior fibrous, and not its tubular part; but this I allow to be hypothetical, and am led to that opinion from the structure of that part most resembling the periosteum in its tendinous composition, and from the very ready and complete recovery of the organ; but I wish the reader to understand that I have had no opportunity of dissecting this disease.

"The testicle and epididymis become four or five times their natural size. The pain which accompanies the disease is not severe, but it is increased towards the evening. When one testicle is enlarged, the other is apt to become affected; and I think, in the majority of

cases, that the disease exists in both testicles.

"The complaint very rarely proceeds to suppuration; but when it does, it produces a granular swelling, in the same manner as the chronic abscess.

"The enlargement of the testicle is rarely a concomitant of the syphilitic sore throat only; but it frequently accompanies the venereal eruption and periosteal inflammation.

"The distinguishing mark of this disease from the simple chronic enlargement of the testicle, will be found in its succeeding syphilitic symptoms, and often in its being combined with those I have mentioned, as well as in its obeying the law of syphilis, viz. of its being liable to an evening exacerbation."

"A gentleman who has been frequently subject to sore throats, which I thought venereal, had his testis gradually enlarge without pain. Its shape was pyramidal; and not being able to distinguish it from hydrocele, I put a lancet into the tunica vaginalis, but only two or three drops of blood were discharged. I gave him the oxym. hydrarg. dissolved in the tincture of bark, which quickly reduced the enlargement of the testicle."

"A man applied to me in Nov. 1807, with a testicle diseased, and hard as a marble. Four years before he had a venereal complaint, and in a few weeks afterwards the testicle became enlarged; but under the use of mercury it was reduced in a month. In four months after the swelling in the testicle returned, and in two months it again disappeared by the same treatment. Two years ago it swelled again, and was again relieved; and in the last spring it became again swollen, and now, in the month of November, it is of large size. The mode of treatment pursued was to give him mercury to affect the mouth, and to continue it for a considerable length of time; but I have not in my notes the termination of the case."

"A. B. had a chancre three years ago, which was not succeeded by bubo. A year since he had a hydrocele in the right tunica vaginalis, which disappeared under the use of mercury and evaporating lotions. Seven or eight months ago he observed a swelling in the right testicle, which now continues: the testis is extremely solid, the epididymis is enlarged, the scrotum is red, and there is pain in the loins and groin."

"C. T. has enlargement of both testes, without redness of the scrotum, and with very little pain. I thought them venereal enlargements. He took large quantities of the compound decoction of sarsaparilla with the oxym. hydrargyri, and got perfectly well."

"A gentleman's servant had a chancre and bubo twelve months ago; since which time the left testis had become enlarged, very much hardened, and it was accompanied with hydrocele. Mercury was given him, and he recovered."

Ossific inflammation is the heading of the next chapter, and we must confess that we doubt the propriety of the term. It appears, from the testimony of Sir Astley, that in dissecting enlarged and very hard testes he has occasionally found ossific deposits; this is analogous to what we meet with in other structures, as cartilage, ligament, serous membrane, artery, &c., but we greatly doubt these being the result of inflammatory action; and in the only case which Sir Astley has detailed in illustration, there was found a "soft pulpy or medullary matter," and "a bunch of hydatids;"—changes of structure which the presence of inflammation will certainly not account for.

On the Glands in the Human Subject.

By JOHN ELLIOTSON, M.D. CANTAB.
F.R.S. &c.*

IN the No of the Gazette for April 4, 1829, will be found a case from St. Thomas's, headed, "Spontaneous Gangrene of the Nose—abscesses in various parts." The case excited much interest at the time of its occurrence, and various conjectures as to its real nature were hazarded, none of which, however, proved satisfactory. Not many weeks after a similar case presented itself, which is thus described by Dr. Elliotson:—

"On Friday, the 26th of the following June, it being my week to admit patients, I was surprised to find another young man, named Thomas Dixon, and twenty-one years of age, lying in William's ward, with the same symptoms as the former.

"The nose and surrounding parts were exceedingly swollen, so that the left eye was closed completely, and the right nearly. The tumefied parts were hot, and of a bright red,

* Medico-Chirurgical Transactions.

with the exception of an inch of the left half of the nose, which was of a mulberry colour: *a profusion of deep yellow tenacious mucus, with a few streaks of blood, exuded from each nostril*, but particularly from the left. Several hard phlyzacious pustules existed on the nose and adjacent parts, on the arms, thighs, and legs, and each was surrounded in the latter situations by a blush of red. A patch of the same colour was observed on the left elbow. The temperature of the surface of the abdomen was 107°. The pulse 144, broad, soft, and weak, so as to be rather an undulation than a pulsation. The respiration 30, and so shallow that the chest scarcely appeared to move. The tongue was dry and rough, and of a brownish red. The skin sweated copiously. He gave rational answers in a fluttering voice, but immediately afterwards always fell into a little incoherence. His movements were tremulous, and, though otherwise exceedingly tranquil, he tossed his arms about, and requested that his wrists might be tied together to prevent this involuntary action. He complained of coldness in the lower extremities, which however were sufficiently warm, though cooler than the rest of the body.

"It appeared that he worked with his father as a blacksmith, at Lambeth, but was not a shoeing smith: that two months previously he had drunk a large draught of cold porter, when hot and perspiring, and had not since been perfectly well; that three weeks previously he had been attacked by acute rheumatism, first of the lower and afterwards of the upper extremities, but had recovered sufficiently to walk on crutches, and on Tuesday last expressed to his friends how happy he was to find himself recovering so fast, and sat some time in the open air on the bank of the river, drinking a pint of porter in the afternoon, and also lounged about the mews; that, early on the very same evening, a pimple arose on the left side of the nose, and became very hot and painful, and the next morning a blush of inflammation was observed around it, which rapidly grew more intense, and he felt exceedingly weak and ill; that he was brought to the hospital on Thursday evening, and ordered colchicum by the apothecary. He assured me that he had never suffered or even run the risk of contracting any venereal

affection, and he was not aware of ever having taken mercury. He had experienced no headache, nor pain any where, except in his nose, the great heat and throbbing of which had distressed him; and at his admission he said his throat was sore.

"Notwithstanding his youth and good constitution, and the excellent health in which he had been on the preceding Tuesday afternoon, with the exception of a rapidly declining rheumatism; and notwithstanding the intensely bright redness of the eyelids, upper part of the cheeks, and around many of the pustules; I considered that the gangrenous aspect of the left side of the nose and of many of the pustules, the mild delirium, the tremulous movements and voice, the profuse sweating, and the want of force in the pulse, so different from its state in Dr. Roots's case when first prescribed for, indicated the employment, not of evacuates, but of means calculated to tranquillise and support. I therefore ordered m. l. of tinctura opii, with grs. x. of the sulphas quininæ to be given immediately, and the latter to be repeated every hour.

"In two hours I visited him again, but found the disease had made great progress in overpowering the system. The elbow, which had been red only before, was now suppurating; the pulse was 166, still smaller and fluttering, and the restlessness was extreme. I instantly gave him m. l. more of the tinct. opii, directing the sulph. quininæ to be continued, and as much strong beef-tea with eggs diffused in it to be supplied as he would take. Neither the nourishment, however, nor any more of the sulphas quininæ, could he be prevailed upon to taste; but he fell asleep soon after this second dose of laudanum, and slept tranquilly, waking occasionally for a minute and turning on the other side, till four o'clock in the morning, when he became very restless for an hour, and then expired."

The identity in nature of this and the former case appeared certain, and the author was now farther convinced that they arose from a specific animal poison; but here his inferences were at an end:—"The nature and source of the morbid poison, of the existence of which I felt satisfied, remained a mystery; I could not even guess at them:—when on the cover of the Medical Gazette for July 4th, I read, "Fatal Case of *Acute*

Glanders in the Human Subject." It instantly flashed upon my mind that this must be what I sought. . . .

"I had no time, however, to open the number of the Gazette immediately; and, on calling upon Mr. Alcock, he inquired if I had seen the Gazette, because he had read a case in it which he thought might throw some light upon the two which I had so frequently mentioned to him, and the inspection of one of which he had witnessed. I read the case, and found my prepossession fully substantiated."

We must refer to the number of our Journal alluded to for the case in question; and we are satisfied that any one who reads it carefully will come to the same conclusion as Dr. Elliotson, with respect to the identity of the diseases. But it remained to trace the cases which had occurred at St. Thomas's up to their origin in the horse, and in doing this no small difficulty was experienced; so often was a link in the chain deficient, that it seemed impossible to pursue it farther, and we must say that a less determined pathologist would have abandoned the investigation in despair. Whole days were devoted to inquiries among the relations and friends of the deceased, but in vain; at length, however, by dint of inquiries, detailed with a minuteness which shows how much interest he took in them, complete success rewarded his perseverance, and the disease was in both instances ascertained to have been communicated by glandered horses—that is, ascertained to such an extent as to constitute by far the most rational explanation of the phenomena.

Another case was soon after communicated to Dr. Elliotson, by Mr. Parrot of Clapham; but instead of detailing this, we prefer giving an account of the disease as it displays itself in the horse, taken from the "*Dictionnaire de Médecine et de Chirurgie Vétérinaires*":—

"The pituitary is very red, very much inflamed, and presents little erosions, which take place rapidly, and become chancres, if we must in compliance with custom so call them, with edges thicker and more exuberant than those of the milder form of the disease. Sometimes the lips and the end of the nose swell, and afterwards the ulcerations commit more extensive ravages, and give rise to a discharge of a purulent appearance, and occasionally of a disagreeable smell. A fætid, purple,

and perhaps bloody sanies, is mixed with it from time to time, at least in some instances, and at length the nasal membrane looks gangrenous. The discharge continues, and becomes more abundant; even blood issues from the nose. The sublingual glands, which are much swollen in all the forms of the disease, are more painful than in the mild acute glanders. The conjunctiva and nasal eyelid (*membrana nictitans*) are at first inflamed, injected with blood, and afterwards acquire a violet hue; the eyelids swell, and the eyes discharge. The local phlegmasia soon extends to the surrounding parts; respiration becomes laborious, the superficial vessels successively congested, and the animal dies, in spite of all we can do, frequently in a few days, at other times after a longer or shorter interval. If the disease is protracted, the symptoms occasionally, though rarely, relax, and the inflammation declines; the animal then appears partially to regain its powers, and may be to a certain degree useful: but the state of the pituitary membrane, and of the *aïge*, and the permanence and the character of the nasal discharge show that the acute stage has degenerated into the chronic. It is in this form especially that attacks of glanders may be considered epizootic. That violently acute glanders is always speedily fatal, and never becomes chronic, is disproved by the following fact:—In a stable of eighteen horses and three asses, all of which were affected, ten died within the first days of the attack; four, after the violence of the disease had abated, remained stationary for two months, and then were cut off by a return of the inflammatory symptoms,—a relapse into the acute stage. The seven which survived presented all the symptoms of chronic glanders, and worked in the country nearly a year, when it was thought proper to kill them."

Dr. Elliotson infers, from three cases having fallen within his observation in so short a time, that the disease, though rare, "is not of extreme rarity;" and this opinion is rendered the more probable by the consideration, that the disease is likely not to have been recognised, from our not having hitherto been sufficiently aware of the possibility of its occurrence. He presumes that some abrasion of the surface is necessary, but that this may be so slight as to escape notice. Several cases of glanders in the human subject are quoted from Rust's *Magazin*.

Illustrations of Mr. S. Cooper's Surgical Dictionary, published Monthly, each Part containing Four Lithographic Plates, with Letterpress Descriptions and References to the Text. Parts I. II. and III.

By an unfortunate, and we must say rather stupid mistake, the plates and letterpress of the first Number do not correspond. This circumstance is calculated to create a degree of confusion, which, however, is easily obviated by putting some of the plates of No. II. into No. I. The first subject illustrated is that of Hernia, and the plates intended for this purpose are extremely well calculated to render the subject intelligible to the student. Considered merely as engravings, they possess considerable merit: the coloured plate *T*—plate 3—is too blue. The second Number contains some illustrations of Fracture of the Cranium and Dislocation of the Hip. In No. III. the principal subject of illustration is Fungus Hæmatodes, one of the plates of which is coloured in a spirited manner. The author deserves encouragement, for the work is calculated to be very useful, and will be found an important addition to Mr. Cooper's excellent Dictionary, or to any other modern system of surgery—such as that formed by Mr. Lawrence's lectures, as published in this journal.

ON QUACKERY.

To the Editor of the London Medical Gazette.

SIR,

"I hate when Vice can bolt her arguments,
And Virtue has no tongue to check her pride."
Comus.

A DERELICTION of principle, with its consequent misconduct, is oftentimes rendered invisible by the brilliancy of wealth, and the fascinations of fashion. Faults, in themselves really criminal, are thus regarded, not as crimes, but as the effects only of unhappy imprudence; he who, in a long train of evil machinations, has failed in defrauding his neighbour, is exculpated as a man whose means were only inadequate to the accomplishment of his designs; the debauchee and the spendthrift are sustained by the powerful influence of high example; while not a few, infatuated with the prevailing humour of

the day, admire, and strange as it may appear, applaud, the undeniable wickedness of a notorious offender. There are some persons who never discern things as they are, being deluded by reverence, fear, or interest; and the honest are liable to the unjust reproach of illiberality and prejudice, if they attempt to expose the malignity of vice before it has manifested itself by uncontrollable violence; for all men are not equally intelligent of reason, and very many are sensible of the existence of error only when naked, and of delinquency only when tangible. After these premises, will you consider the following prodigy, with the remarks arising from it, worthy of perpetuation in the pages of your journal?

"The Temple of Fame," observes Junius, "is the shortest passage to riches and preferment:" it would seem that it is now easy to obtain a high professional reputation in medicine, by curing the mildest diseases by the severest remedies; forgetting the opinion of Sydenham, that the skilful physician requires more skill to know when to do nothing, than in vigorously applying the most active means of cure. (See the general tenor of Sydenham's remarks on the ague of the year 1661.) But medicine, like many other good things, is liable to abuse; and abuse tests the value of a thing, which is useful in exact proportion to its capability of being abused. This last observation has been lately verified by a man, who resides in a magnificent house, invites the wealthy who are diseased to come hither, proclaims that he alone knows how to preserve or restore health, and, in demonstrating the truth of his professions, procures from the ensnared large sums of money, while he submits them to certain bodily pain, perhaps death, and urges them to indulge in a system of the most intemperate diet. The diseases, which he thus creates for the avowed purpose of curing other internal diseases, real or imaginary, are curable by further intemperance; and if the poor victim struggles through the fierce trial, his recovery is hailed as a victorious confirmation of the propriety of the treatment; although, if he dies, his death is made, if possible, to subside into oblivion, and no improvement of practice is derived from the study of failure. All diseases are said to be curable by *one* remedy, and that is an

external application, a potent escharotic; and the maladies, which under this treatment terminate fatally, are affirmed to have been totally incurable. Of the scenes which take place at this house, where ladies of delicacy and good education have been exposed naked, it were curious to inquire; and of the mystery and oaths of secrecy which bound those poor deluded creatures not to reveal the torments of that Lazar-house, it were strange to learn; but these things are trifles, when we discover that the wealthy, the great, and the noble, are the dupes, and that men whose circumstances and conditions of life enable them to know better, magnify the virtues of the cheat, and foster the man who destroys their wives and daughters. Profit, success, and fame, ensure the confidence and notoriety of the quack: the phantom of midnight revelry, and the gaunt spectre of ravaging disease, swell the numbers of his assembly, and credulously implore relief; and the robust and the vigorous frequent this new haunt for the dissipation of ennui, and assert, with polite vociferation, that he who can thus so perfectly cure the mortal phthisis is no ordinary physician.

So much for the good taste of the day, the march of intellect, and the venerable ascendancy of science: for in the mature wisdom of the nineteenth century, it is impossible for any man to be barbarous, and more than impossible for any gentleman to patronize barbarity, especially within the polite and wealthier circles of society.

To trample, in wanton exultation, on the prostrate, to launch the shaft of satire at the debased and fallen, can yield but a sorry satisfaction even to a malicious mind; and it were the part of a good man, no longer to condemn the actions of St. John Long, for he is already virtually dead; the season of his nefarious emolument has expired, and his wickedness now forms a singular passage in the history of medicine. But as there are some virtues, from the frequent contemplation of which we gather strength, so there are some vices, which, by being exposed, manifest the truth and fortify the principles of goodness. The character of Howard, who toiled from prison to prison, to alleviate the sufferings of the wretched and friendless under the chains of justice, and the inconsolable remorse, perhaps,

of guilt, cannot be studied without advantage and delight; likewise the man, who, for sordid lucre, forgets his God—and, with satanic confidence, deliberately injures the health or destroys the lives of his fellow-creatures, is an astounding lesson of enormous human depravity as opposed to the little sum of human virtue; and more astounding still is the folly of those, who, in a day when knowledge is said to be attaining to its meridian height, wilfully pay the price of villainy, and knowingly submit to the arts of consummate ignorance, and the tortures of knavish cruelty. What shall we say for that age, when they, who, in the study of medicine, sedulously “grow still paler by the midnight lamp,” and who, in the practice of their profession, pursue their daily avocations with honest benevolence, are almost stigmatized as bigots for naming St. John Long as a quack? Yet such is the state of public opinion in the present æra! The delusion, which maintains that St. John Long is right, is equivalent to the depravity of St. John Long himself; the prejudice, ascribed to those who condemn him, is urged by persons whose very opinion originates in an opposite prejudice: and, indeed, it is the reigning prejudice of the day, that liberality (falsely so styled) should compel all opposite opinions to succumb, as in duty bound, to its own. It is objected to medical men, that they envy, and are ready to persecute, St. John Long: but we may ask, why should he be persecuted, and for what can he be envied? If by persecution is meant the firm maintenance of our own rights, then truly in professing ourselves, we persecute him. If by envy is meant our desire of being patronized for acknowledged medical skill, then truly in proving our own worthiness of patronage, we envy him: let such objectors remember that there are steadfast principles of thought by which we applaud or condemn, without injustice; that there are limits to liberality, and bounds even to the practice of Christian charity. Liberality towards an opponent may be practised in bestowing the rights of humanity; but not in supplying the means of promoting his success. These are not times to sacrifice principles to expediency, nor tamely to deliver up what we know and feel to be just, and proper, and beneficial, merely

for the sake of being esteemed as kind and liberal.

Lastly—concerning St. John Long, we may rest assured that arrogance and ignorant pretensions, though they may obtain popularity for a while, are finally involved in confusion, disaster, and disgrace; and that every one is not happy because he shall have escaped the ostensible punishment of his faults, since private remorse ultimately inflicts a more severe punishment than is ever exacted by law against any iniquity. Concerning ourselves we may conclude, that prudence derived from failure and adversity, which teaches reason and reflection, energy and dispatch of business, becomes the best and safest means of insuring satisfactory success; and that inward happiness is more permanently secured by filling a situation rather below than above personal merit and ability; since dignity of character is proportioned, not to the splendour and parade of office, but to the integrity, skill, and degree of moral perfection, with which the functions of that office are discharged.

MEDICULUS.

November 22, 1830.

MEDICAL GAZETTE.

Saturday, December 4, 1830.

"Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

LONDON UNIVERSITY—MR. BELL.

WHEN, a fortnight ago, we announced that Mr. Bell had resigned the Physiological chair, and that the London University had thus lost its last hold on the most distinguished of its teachers, we expressed our opinion that some explanation of the circumstances was imperatively required. Indeed, when the period at which this event has occurred is considered, namely, in the middle of the academic season, it is quite obvious

that an explanation was due by Mr. Bell to his pupils, by the Council to the proprietors, and by both to the public. Mr. Bell's account of the transaction will be found in our present number; that of the Council is yet to come, but that it will come, we can scarcely doubt, as the general body of proprietors will probably not be contented till they have fully investigated the circumstances of a proceeding so injurious to their interests. That any error in the management of the London University could come upon us by surprise, it would be un candid to assert: we have so long marked, and so strongly protested against the system of misrule which was rapidly rendering abortive the fair promises of this infant institution, that we look upon the events which Mr. Bell's letter records, merely as corroborative of opinions which we have formerly advanced—as the practical results of those injudicious arrangements, the evil tendency of which we have repeatedly taken occasion to deprecate. With Mr. Bell individually neither the public nor we have any concern, and we only allude to the matter inasmuch as his particular case illustrates the general system, and his especial removal lessens the sum of talent possessed by the establishment.

One of the radical and most conspicuous blunders in the London University consisted in trusting the arrangements regarding the Medical school to those alike ignorant of the science of medicine and unacquainted with details—a knowledge of which was imperatively required by those who should undertake to regulate the departments of the various teachers. The governing body is made up almost entirely of lawyers and merchants, nor would it be easy to select a class of men less qualified by the nature of their pursuits and occupations to regulate the business of a medical school; accordingly, some of

their subdivisions of science were made at the sacrifice of all propriety, and parts intrinsically connected were unhesitatingly dis severed, though the separation destroyed the unity and perfection of both. Again, instead of trusting for the success of their great design to enlisting under their banners men of matured reputation, their choice, with few exceptions, fell upon gentlemen, who, of whatever promise, had yet their characters as teachers to make: thus do the Council seem to have placed their chief dependence on external attractions—the pomp and circumstance of a splendid building and spacious theatres.

The object avowedly entertained was, “the formation of a school superior to what this country had yet to boast of.”—“This failing,” says Mr. Bell, “I did not desire to continue a day in the University of London.” Indeed, if the school in Gower-Street be compared with the private establishments in the metropolis, there is this great security presented to the student in the latter, that they depend for their very existence on maintaining their reputation. The opportunities of information which are afforded, and the comparative degrees of skill and care evinced in communicating instruction—the urbanity and attention of the teacher—these are tenures by which the private lecturer holds his property, and they are strong incentives to exertion;—such, indeed, as will always give rise to a more close connexion between the professor and the pupil than exists, or by the present system can be made to exist, within the walls of an institution such as the London University. But if the nature of the arrangements precluded that spirit of emulation and removed that necessity for individual exertion which might have led to useful results, abundant room was left for rivalry and dissension, where mutual co-operation and support were essential to success.

Mr. Bell wished to preside over the anatomical department, nay tells us that he accepted his professorship on that understanding—“understanding” is the word, but it ought to have been *condition*. Had this arrangement been made definite and precise, how much of the heartburnings, disappointments, and disreputable caballing which has since occurred, might have been prevented. But, as it was, anatomy was so divided that each professor complained of his province being invaded by his neighbour, and during the present season “three certainly were lecturing in the same class-room, on the same subjects, and with the same preparations put upon the table three successive times in the same day”! Had this statement come from any less authority than one of the Professors (see Mr. Bell’s letter), we should have hesitated to give currency to so monstrous an absurdity, lest it had been supposed that we were guilty of exaggeration. All this has originated in the ignorance of the Council, and an attempt to reconcile things which are incompatible.

Rumours of Mr. Bell’s resignation have from time to time been afloat, and we ourselves inserted a notice of a similar nature last year. The intimation which we gave was correct, inasmuch as the resignation was tendered, though not accepted;—now it has been accepted at a time when it was not offered. The matter stands thus:—Mr. Bell, disappointed at the failure of the hopes he had entertained when the University was planned—mortified to see that it excelled the Hospital schools in nothing save the superiority of its pretensions—and evidently feeling deeply the neglect shewn towards himself personally, had at an early period intimated his intention of withdrawing. “A few days after the first opening of the University (says he), I saw that the system would

not work, and I then offered my resignation." Various circumstances, however, led to the completion of his purpose being postponed; and it is possible that the eyes of the Council might at length have been opened to the importance of retaining him at any reasonable sacrifice of their own opinions, but for a fortuitous occurrence, which brought the elements of discord, so long fermenting, to a speedy and somewhat violent explosion. Mr. Bell, in one of his lectures, had expressed his desire to effect some arrangement by which the pupils at the Middlesex and St. George's should mutually be admitted to the clinical discourses at either hospital. That reciprocity of instruction was attainable, or if attainable, was likely to be followed by consequences so beneficial as Mr. Bell anticipated, we cannot perceive. Neither, on the other hand, is it very apparent in what manner such a proceeding was calculated to injure the University; for, as Mr. Bell justly observes, if his pupils were brought within the influence of the teachers at St. George's, the pupils of the latter would also have been exposed to the attractions of the University; and to have supposed that the latter school was thus exposed to the risk of desertion from its ranks, is an admission which it was extremely injudicious on the part of the Council thus indirectly to have made with regard to any institution whatever. Nevertheless "some meddling fool" (we use the words of Mr. Bell) brought the subject before them, when they indited a minute recording their opinion "that Mr. Bell holds out encouragement to another school of medicine, and withdraws his support from the class of surgery in the University." It is evident that from this time every bond of union between Mr. Bell and the Council was severed, and the result which followed became all but inevitable. The denouement, however,

was even more abrupt than had been expected, and is not entirely free from the ridiculous. Mr. Bell did not conceal his intention of resigning at the end of the season, when he had brought his present courses to a close; and this being mentioned to the Council, but without any intimation made to them by Mr. Bell, they followed up the former minute by one of similar spirit—that "immediate steps be taken for the appointment of a professor of physiology, who shall enter on his duties at the opening of the next session." An earlier opportunity of commencing his duties was, however, afforded to the new professor—for, from the promulgation of the minute, Mr. Bell never lectured again; and thus, between the precipitancy of the Council and the indignation of the Professor, were the pupils of the London University deprived at once, without any notice whatever, and in the middle of the session, of the lectures on one of the most important elementary branches of medical science; and compelled either to forego such instruction altogether, or accept of such substitute for Mr. Bell's lectures as some other professor could dove-tail to his own course, to meet the exigencies of the moment.

It is impossible to contemplate these occurrences without being forcibly struck with the gross mismanagement and absurdity which they betray. The governing body would seem to lack both judgment and decision: it would have been much better for both parties had they accepted Mr. Bell's resignation at once, rather than have kept him hanging on—listening to his complaints, but leaving his grievances unredressed. If reasonable, they ought to have produced effect; if otherwise, to have been rejected. As to Mr. Bell, it has evidently been for him an unfortunate connexion: he made great sacrifices to accept a chair, which it is obvious he never filled with comfort; and he ought

either to have evinced the same firmness at the onset which he has displayed at the last, or from the commencement to have made up his mind to yield to the force of a current he could not stem, and made the best of that department, shorn as it was of its fair proportions, which the Council in their wisdom had assigned him.

MR. BELL'S LETTER TO HIS PUPILS OF
THE LONDON UNIVERSITY,

On taking leave of them.

GENTLEMEN,—Your good sense will suggest to you why I ought not, on this occasion of addressing you, to assign all my reasons for leaving the London University. Such a course would involve matters of which you will be better judges hereafter; but I owe you an apology for the suddenness with which I have left you, and an explanation why a resolution, deliberately taken, should be so abruptly disclosed and acted upon.

My resolution to resign at the conclusion of the present season, did not proceed from the conduct of individuals; nor did I take upon me to estimate the characters or talents of my associates. My objections have been to a system; and, in justice to you, I ought to add, that the advantages I looked for from a different arrangement would have come very slowly, and could hardly have been attained in your time. The disappointment of my hopes does not imply that any professor is unworthy of your most respectful attention, or that the school is inferior to any other. The statement which you will find in the following pages belongs to a different question altogether—the formation of a school superior to what this country has had yet to boast of, in system, subdivision of labour, and arrangement; this failing, I did not desire to continue a day in the University of London.

The members of the Council, from education and condition in society, are well suited to preside over the classical and mathematical studies; but they have never appeared to me to respect sufficiently the medical profession; and, consequently, have never sought for information to enable them to improve the medical school. When they ap-

pointed professors, it was perhaps too much to expect that they should defer to an authority so recently of their own creation.

After my long experience in teaching, it would have been strange if I had not had a desire to see the system of our schools improved; and I should have been to blame if I had not used my endeavours, on an occasion of such splendid promise, to gain something for my profession. This engaged me in expositions with the Council of the University, so that I am willing to acknowledge that they may have traced much of their trouble to me; but they could neither comprehend the strong motives which urged me, nor foresee the happy consequences of the improvements which I advocated. Here was the bias given, which it is necessary to know in order to understand how impediments so slight as those I am to describe could be attended with effects so unexpected.

I had my lesser and personal grievances. To those who know how little I value physiology, in the common acceptance of the term, it will be a proof of my desire to see the experiment of a new school fairly tried, that I submitted to be called professor of a science (if a science it be) on which an inceptor candidate for medical degrees would read lectures more readily than I could. You are aware that the subjects on which I lectured were the higher departments of anatomy—that I reasoned on a demonstration in which my knowledge of anatomy and my experience of disease came into use as laying the foundation of just principles in the practice of your profession. If you will call to recollection any one lecture, or take the last of all as an instance, you will see how little the subject matter of my lectures corresponds with the title put upon them.

It has been imputed to me as a fault, that I wished to preside over the anatomical department. I avow this; and I entered the University upon that understanding. But this, on my part, was no assumption of superiority, beyond what time, study, and experience, give to every man. It was my expectation, that all the lectures connected with anatomy, comparative anatomy, physiology, pathology, surgical anatomy, would be formed into such a system as would at once allow each professor full opportunities to display his talents, and fulfil

the liberal intentions of those who designed a great school of medicine. All the errors and misconceptions that have occurred have proceeded from the original appointments made by the Council: and when I express this, let it not be said that I take upon myself to object to the individuals selected. But the elections were all made before any system was arranged. If the Council had been fully aware of what was necessary for the improvement of the medical schools, and had made out the different departments to be taught, and had afterwards appointed professors to these departments, all might have gone on satisfactorily. But professors were elected, and then attempts were made to form a system; so that when the subjects were distributed, each professor conceived that the rights he had formally obtained through his election were infringed. We may here see, if we take up the case of any particular professor, that he was vindicated in making his complaints: and we may see also how the Council became involved in trouble; which they attributed to the individual applicants, when it all necessarily arose, as I have said, from a wrong step of their own at the commencement. They wished to do justice; and if we could suppose that a certain number of claimants were to be supplied from a common stock of a common material, justice would have sufficed; but here, knowledge as well as justice was necessary to a proper distribution. We know that in the present season no fewer than five gentlemen were engaged in teaching human anatomy; and three certainly were lecturing in the same classroom, on the same subjects, and with the same preparations put upon the table, three successive times in the same day. No member of the Council ought to take offence when I say, that unless he has a perfect knowledge of the whole subject, and experience of the practical consequences, he cannot comprehend the effect of such promiscuous distribution, or of such a sacrifice to the principle of equality.

A few days after the first opening of the University I saw that the system would not work, and I then offered my resignation. In the end of last session it was equally obvious to me that the machine would not right itself, and that no efforts of mine could avail; and I declared, that unless different arrange-

ments were made, I must leave the University. My proposal was, that the Council should put down on paper their understanding of my designation and duties in the London University. This I was to submit to my friends; and if they approved, I promised to proceed zealously. The Council showed every desire to meet my wishes; but about this time they became engaged in other discussions, no doubt sufficiently distracting, but with which I had nothing to do; and thus the summer was spent, and the first of October drew near. It was then no time to resign; and therefore I held the secret intention of resigning at the end of the present season.

You know that, at all times, I address myself too earnestly to the subject of my lecture to admit the introduction of a name, or a sentiment, at variance with the tenor of my discourse. You know this now; and I trust that you do me justice. It has been stated that I said, in my public lecture, that unless some gentlemen were removed from the University I would resign. I repeat that I objected to the system, and not to any individual—to the acts of the Council, and not to the conduct of professors.

When I first lectured to you, you appeared to evince curiosity rather than interest; but, as you came to comprehend the subject, I had the pleasure of seeing you enter more and more deeply into it; and, for my own part, always agreeably engaged when with the students, I had forgotten the existence of any body of men that could disturb our harmony. In the meantime the Council of the University were occupied, unwittingly to me, with a matter which they have magnified into importance. In my clinical lecture at the Middlesex Hospital I had expressed a desire to enlarge the opportunities of the pupils there and at St. George's. I stated that the opinions of men educated in the principles of Mr. Hunter, and with the experience of a London hospital, agreed in most of the great questions of practice; and I said that, if I could gain for my own pupils the advantage of hearing another hospital surgeon, they would learn that men of experience and of character, who had no necessity to court notoriety by new and bold operations, differed very little in opinion. If the pupils could have such advantages,

they would better withstand the prevailing vice of the profession.

This desire, so natural to any one who had the best interests of the hospital pupils at heart, was brought before the Council of the University by some meddling fool; on which they transmit to me a minute with the following expression: — "That it appears that Mr. Bell holds out encouragement to another school of medicine, and withdraws his support from the class of surgery in the University."

If, by such means, I placed my hospital pupils within the influence of the teachers in St. George's, I at the same time brought the pupils of St. George's Hospital under the attraction of the University; and the Council are taking a very humble tone if they admit that, by placing the two schools in comparison, that of the University must suffer. It is the last of numerous instances in which they have been influenced by the fears and prejudices of those who communicated with them.

The expression of my intention to retire at the conclusion of the present course was drawn from me by a request to form one of a new society, which had nothing to do with my public prelections. I had strong reasons for declining this invitation; and, to avoid giving offence, I put my refusal upon the shortness of the period that I would remain a member of the University. I added, that I would, in due season, officially and regularly, according to the obligation I had subscribed, notify my intention of resigning. I need not add that I anticipated no such consequences as have followed. I hoped to have had the pleasure of accompanying you through the season in your course of studies; but the Council, learning that I had so expressed myself, without any communication with me, chose to act upon this as a resignation, and followed up the minute, which I have in part transcribed, with a resolution, that "immediate steps be taken for the appointment of a professor of physiology, who shall enter on his duties at the opening of the next session."

Such a minute, if respectfully conveyed, must still have been offensive; but it was prefaced with no word of acknowledgment or regret, — the more surprising as coming from high-bred gentlemen. I have said truly, that when I entered my class-room, I have

thought only of my subject, and of teaching you; and this at a time when I had much to irritate me. I had a good title to expect, that, when the Council came to act deliberately, as the patrons of the University, they would have considered, that from the hour in which I had opened the classes of the University, to the moment of their deliberations, there had not been a pause in my exertions; and that the testimony of your uninterrupted attendance, zeal for the subject, and respect for your teacher, had accompanied me throughout. Repeatedly, during the last two years, have I urged to the members of the Council, that they should take their impressions from the attendance of the pupils on the public lectures, and from nothing else.

On receiving this minute, I did not take my final resolution without giving the Council the opportunity of rescinding it, in order that I might fulfil my engagements with you. I informed them that, with such a resolution on their books, I could not again meet my pupils; but I did not feel myself called upon to accept their invitation to converse upon it. The well grounded respect which I had for many members of the Council, and especially for those whose good-nature led them to come forward upon such occasions, had often before induced me to yield every thing to their wishes; but here it was necessary to be decided. There may have been some feeling in this matter; but if I had not in such circumstances taken leave of the University, I should have compromised my own respectability, and that of the profession for which you are preparing yourselves. I need not say that I acted against my own interest when I resigned my lectures, which have been a continual source of satisfaction and improvement to me, when I gave up emoluments not insignificant to my very moderate income, and when I exposed myself to the displeasure of many influential personages. For the four last years I have had my mind but too intently occupied with the interests of the London University. I have lost much time at a period of life when it is hard to redeem it.

Any grave and sensible person, on hearing this statement, may well say, "Why did not Mr. Bell deliver his lectures, and think of nothing more?" — This was exactly what I attempted to

do—the determination with which I commenced the season. But such a mode of proceeding seemed to irritate, more than the strongest expostulations that I had hitherto offered to the Council, and brought them to that resolution which has made our connexion no longer possible. Although I have said, from the deepest conviction, that the last duty a man should resign was that of giving the results of his experience to the younger members of his profession, I am now precluded from doing this, and must henceforth engage myself exclusively in the practice of my profession.

Gentlemen,—I could have wished that this interruption had occurred when I had finished my Introductory Lectures on *Design, as exhibited in the Animal Structure*. I then delivered a lecture to you on a general subject, which I would now desire you to consider as my last. Without reference to present circumstances, but proceeding from the interest I had in you, I endeavoured to make an impression, which, if permanent, cannot fail to influence you through life. You may remember that I took the life and labours of Baron Haller as the happiest example of the combination of the philosopher and the patriot; that I pointed out to you his enthusiasm in youth, with the restraints he put upon himself; the great labours he was engaged in at the middle period of his life, and their splendid results; his retirement, his philanthropy, and his remarkable death.

To prove the necessity of having a plan of life, and pursuing it steadily, and that however great a man's talents may be they require concentration and direction, I instanced the life of Mr. Hunter. I assured you that labour, and the pertinacious pursuit of great objects, were the characters of true genius. I directed you to the contemplation of the museum in the College of Surgeons, as a proof of how much one man may do in his day.

As a further proof of genius, being distinguished from the possession of trifling accomplishments, I placed before you the character and labours of Baron Cuvier. As some encouragement in those studies which you now believe to be so severe a call upon your patience and industry, I represented

of portions of bones, the fossil remains of animals. I represented him as possessed of a knowledge of the minute processes of the bones, to which your knowledge is only as the alphabet of a child. I represented to you this man of great genius, and highly honoured in all countries, submitting to the patient investigation of these materials, until he selected and arranged the minute portions into skeletons; thus discovering the classes and genera of animals that no longer inhabit the earth, and ascertaining the revolutions which the world itself had undergone. And this I proved to you was the effect of true genius, carrying a man forward to great objects through means apparently trifling to common minds.

It was in the conclusion of that lecture, in which I felt you sympathised with me as pupils, that I sought to turn you from frivolous pursuits, and to direct you in the course of study best suited to advance you to distinction, and which at all events would guard you from ennui, and give you a pride in your profession. I would have you to look back upon that lecture as conveying my last advice, and as evincing the interest I have in you.

The sentiment is so natural, that I am sure you will believe me when I say, that short as the time has been which we have spent together in the present season, being the last of my pupils, I must ever feel greater interest in you than in those who have gone before you.

CHARLES BELL.

Soho-Square,
November 25, 1830.

ROYAL SOCIETY.

HIS Royal Highness the Duke of Sussex has been elected President of the Royal Society. The numbers were—for the successful candidate, 119; for Mr. Herschel, 111; majority *eight*! The Times, in announcing this event, remarks, that “the first scientific establishment in the empire has obtained a prince, and missed a philosopher for its President.”

REPORTS OF CASES OCCURRING
AT PUBLIC INSTITUTIONS.

HOTEL DIEU.

Pathology of Tetanus.

It is not very long since the opinion began to gain ground that tetanus essentially consisted in the inflammation of the spinal membranes, with or without injury of the contained cord; but more recent observation tends to shew that this is not always a circumstance of the disease; that in general tetanus is unaccompanied by any appreciable lesion, and that where inflammation of parts within the spine has been detected, it is either secondary to some lesion more deeply seated in the organ, or a complication of it.

Wounds of the sole of the foot, it is known, frequently give rise to tetanic symptoms, though the complaint may not actually make its appearance for a fortnight, a month, or it may be more, after the infliction of the wound, and even long after the local injury has ceased to attract notice, and which perhaps originally appeared to be of the most trifling consequence.

The following case will shew the possible existence of tetanus without any appreciable organic injury; and that it may supervene at a considerable distance of time after the receipt of a slight wound in the sole of the foot.

A man, named Cavazo, 33 years of age, became a patient in the Hotel Dieu about the middle of last month. He was a person apparently of sound robust health, and complained at that time of nothing but a pain in the lumbar region—a pain which, upon examination, appeared to be merely muscular; there was, in fact, no other phenomenon connected with the ailment which had now lasted for some days without being traceable to any cause. The motions of the trunk were become very painful. Sixty leeches were applied to the loins, baths were prescribed, and rest was ordered. For some days nothing remarkable ensued, except, indeed, the lumbar pain was considerably diminished; but now the patient began to feel a general uneasiness; the motions of his arms, he complained, were impeded by a stiffness in them; and he experienced much difficulty in opening his mouth, the jaws appearing to have a tendency

to lock. Of course, the existence of tetanus was here fairly presumable. Being now questioned with more accuracy, the man recollected that about a month before he came into the hospital he hurt his foot with a nail, but it was a slight wound, soon healed, and left no trace whatever after it. Now what relation is there between the actual symptoms of tetanus and the slight hurt just mentioned? That there is a relation must be admitted, for the observation of similar phenomena is on record. To inquire into the cause of the delay in the appearance of the symptoms at so long an interval after the infliction of the wound would not be unattended with interest, if it but promised to be useful in leading to a new and improved mode of treatment; such as, for instance, the application of the chief part of the remedies to the part primarily injured, as is done in the management of hydrophobia.

However this be, the most extensive bleedings, leeches in great number applied from time to time along the spine; opium administered in every possible way, and in doses amounting to eight grains a-day, and vapour baths, had not the least success in preventing the disease from running its course; but it may be observed that the sanguineous depletions produced more relief than any other remedy that was adopted. This case had some rather unusual circumstances connected with it; the limbs, for example, in place of being constantly stiff, were capable of both flexion and extension; the muscles, however, seemed hard and inflexible to the touch, and those of the abdomen, in particular, had a considerable degree of firmness. These symptoms all through only varied with respect to greater or less. There was no improvement in the patient. His intellectual powers were not disturbed, and he was able to give rational answers to all questions put to him up to the period of his death—just eighteen days after the manifestation of the first symptoms.

Nor did the examination of the body after death tend to confirm the opinion that tetanus is coexistent with the inflamed condition of the cerebro-spinal axis. There was no injection either in the brain or the spinal marrow; these parts were particularly firm: both brain and spinal marrow were examined with the greatest care; so were the mem-

branes; but no where could any injury be detected. The fluid of the cerebro-spinal cavity was as abundant as usual, and the principal nervous trunks, on inspection, were found quite sound. In the cavity of the thorax the lungs crepitated, and on pressure yielded a copious quantity of that bronchial foam, which, when it exists abundantly there, is the immediate cause of death. Death, it may be observed, is in this case produced by asphyxia: the bronchial exhalation first accumulates, then the air is introduced, and renders it frothy; but the quantity still goes on increasing until at length a moment arrives when the air inspired can no longer accomplish the arterializing process, and the consequence is fatal. This was the catastrophe—*asphyxia arising from bronchial foam*—that carried off the patient in question.—*Lancette Française*.

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE,

DELIVERED BY DR. ELLIOTSON,

November 22, 1830.

Announcement of Cases — Dropsy; variis forms of the Disease, and corresponding Methods of Treatment—Case of Hypertrophy of the left Ventricle of the Heart; Ossification.

THERE were nine cases admitted, gentlemen, last Thursday, under my care—three women and six men,

Among the women was a slight case of anasarca—one of a variety of affections, at the bottom of which seemed to be leucorrhœa—and one of a considerable tumor in the abdomen. This tumor was moveable, reached above the umbilicus, branched out into lobes, was unattended with pain, and could be traced down into the pelvis. I could not trace it lower on one side than on the other, and on examining per vaginam, I discovered the os uteri and the neck of the uterus in their proper situation, and perfectly healthy. I could not discover any disease of the womb, nor could I feel the tumor: it was not so deep down on either side as to allow it to be felt in the vagina by the finger, although, by pressing the abdomen, the os uteri could be forced down. It is very likely to be a diseased ovary; but upon its true character I do not feel myself at present authorised to give a decided opinion.

Among the men was a case of disease of the heart, in which indeed not only the heart, but the lungs and the liver also were

diseased, but the heart principally—a case of pericarditis and organically diseased heart—a case of chronic inflammation both of the bronchiæ and of the stomach, of bronchitis and gastritis—a case of bronchitis which was attended with general dropsy, anasarca—a case of pleuritis—a case of pure bronchitis, without any dropsy—and a case of gout. These were the cases which were admitted.

Very few cases have been presented, and only one of them of the least interest. One case presented was that of abscess of the glands at the angle of the jaw, which was treated first by cold applications and leeches; but suppuration in spite of them took place, and the abscess was opened, though to no great amount. The suppuration was greatly limited by these means, and I am satisfied that the steady application of cold to enlarged and inflamed glands is one of the most effectual modes of treating them.

The only case of interest was one of severe general dropsy, which was cured; and certainly it was a case of very considerable interest. It occurred in a girl named Maria Sudgwick, æt. 14, and admitted on the 14th Oct. She was delicate, had light hair, a fair and very fine skin, and ruddy complexion. After the disease was removed, the redness in the cheeks remained, so that it was her natural colour. It appeared that she had been the subject of ague at different times for the last three years; that about three months before her admission her belly had become swelled, and not long afterwards her legs; there had been also cough for about a month, but she had no pain in any part of the chest. She was swollen when I saw her from head to foot, but the abdomen was particularly swelled. The right eye was quite closed on account of the swelling of the face, and the left nearly so. The whole of the abdomen was tender on pressure, and the respiration was quick when she lay on her back; but that in all probability arose from the tenderness of the abdomen. She had, besides this, diarrhœa—diarrhœa attended by griping. Between the great distention of the abdomen by fluid, and its tenderness, it was impossible for me to ascertain whether there was any enlargement or induration of the liver or of the spleen; nor could I ascertain whether indeed any particular organs were inflamed.

The case appeared a very bad one, for there was besides intense general dropsy, anasarca, and ascites, and extreme tenderness of the whole abdomen, a great feebleness of the pulse—it was quick, but exceedingly feeble. It was very possible too that she might have great organic disease, as she had suffered from ague.

The indication of treatment, however, was of course to subdue the inflammatory state of the peritoneum in the first instance. I dreaded the application even of leeches,

from the great smallness and feebleness of the pulse: I ventured to put on twelve, and after their removal I covered the part with a constant bran poultice. Mere smallness of the pulse would have been no counter-indication to free bleeding, had it been also solid; but it was extremely soft and feeble. The leeches relieved the tenderness of the abdomen considerably; the pulse, however, the next day was so much the weaker, and I therefore could not think of applying leeches a second time; yet she felt better. I ordered her at the same time with the leeches, three grains of hydrarg. c. creta, and the sixth of a grain of opium every four hours, making 18 grains of hydrarg. c. creta and one grain of opium in the 24 hours. It was necessary to give her this form of mercury on account of the diarrhœa, for any other would only have irritated the intestines, and increased the purging: and it was necessary even to guard it with opium, which, independently too of the mercury, would have been proper, on account of the diarrhœa. I gave her this mercury on account of the inflammatory state of the peritoneum—on account of the dropsy being evidently of an inflammatory nature. I gave her no diuretics. The treatment evidently was to consist in the removal of the inflammatory state of the peritoneum, and checking the diarrhœa; for had the diarrhœa continued, she most probably would have suffered from it considerably, and perhaps have sunk. Yet it would have been wrong to have stopped it suddenly, for the cessation of secretion of the inner membrane of the intestines, might have increased the secretion by the peritoneal coat. I have known ascites produced by a sudden cessation of diarrhœa. The diarrhœa was partially checked, and the tenderness and tension of the abdomen diminished on the very next day. The motions that had occurred were serous, thin, copious, and very offensive. She vomited two or three times the second day after breakfast, and the pulse was scarcely perceptible; yet she did not feel herself weaker. On the 16th (the third day) she felt much better; there was no pain on pressure on any part of the abdomen, still less tension and tumefaction; the vomiting had not returned; the bowels had only been evacuated twice in the last 24 hours; the pulse had become more distinct; the motions, however, which had occurred were copious and watery, but were now yellowish; the quantity of urine was increased, and she slept very well. The treatment was not altered during the whole time that I had her under my care. The leeches of course were not applied again, but the poultice, the hydrarg. c. creta, and likewise the opium, were continued in exactly the same doses for three weeks. Without doing any thing more than this, she gradually became perfectly well; the abdomen

subsided to its proper size, the tenderness never returned, the pulse became gradually slower and stronger, the anasarca disappeared from every part of the body, she very soon left her bed, and appeared in perfect health. I was then able to examine the abdomen, and I found no enlargement of any organ—no enlargement nor induration could be discovered in any organ whatever. The case was one very striking, and doubtless many who saw her thought she would die, and I had very great apprehensions myself; but under that simple treatment the result was as I have mentioned. She was presented on the 18th November. Till the 19th of October I allowed her only milk, gruel, arrow root, and weak broth; but from that time she had half a mutton chop daily, which she continued to take till she went out.

Now, however simple this treatment was, I am convinced that any other would have destroyed her. Had I given her common stimulants or tonics, or full diet; or had I given her stimulating diuretics, I should have most probably induced excessive irritation of the mucous membrane of the stomach and intestines—I should have suppressed the urine altogether, have increased the peritonitis, and destroyed her. I have no doubt that had she taken squills and spirit of nitric æther, and been allowed wine, she would have presently sunk. The case was one of inflammatory dropsy, the inflammation being chiefly seated in the peritoneum, and attended with great debility. Had there been no such debility, I should not have been contented with leeches, but have bled her well from the arm; and if I had applied leeches, I should have done so very freely. I should also not have given her even weak broth, but confined her to slops—to barley water and tea.

You are of course well aware that many cases of dropsy are exactly of this description. Dropsies, in my lectures on the practice of medicine, I endeavoured to generalize with many other affections: with fluxes, for example,—discharges from the mucous membrane; with hæmorrhages of all kinds, whether from mucous membranes or not, and with various organic diseases. I stated that these occurrences might be inflammatory, or they might be free from an inflammatory state; that they are all to be diminished very much, and many of them cured simply by the treatment of inflammation, or that mode of treatment may be exceedingly improper. This is most strikingly exemplified in the discharges from the various mucous membranes, very many of which may be cured by simple bleeding, general or local, and starving, while others require stimuli to the part itself, or general stimuli and tonics. Dropsy sometimes arises, therefore, from an inflammatory state, but it is to be remembered that it sometimes arises

from an opposite condition of the system. When persons are bled to excess they become dropsical, not in that instance from inflammation, but from debility. When persons are starved, their legs are observed to swell; they have hollowness of the eyes, extreme contraction of all the features, but enlarged ankles. Frequently, too, dropsy arises from an obstruction to the return of the lymph, or if the blood in the veins is impeded; and in the latter case, from the great distention that is produced, the blood-vessels ease themselves by pouring forth fluid into the serous or cellular membranes. Haemorrhage will sometimes arise from the same cause: it is not uncommon in diseases of the heart, in which the blood is obstructed, for haemorrhage to occur from the alimentary canal—haemorrhage which speedily proves fatal. Sometimes dropsy arises without our being well able to explain its origin. When there is disease of the kidney, it is common for dropsy to occur; one can hardly, however, see why it should be so, unless it arise from the quantity of urine being diminished, and the secretions of the cellular and serous membranes making up for the deficiency. Yet frequently there is here no deficiency of urine; we hardly see why, in disease of some other viscera, there should be dropsy unless from the cachectic state induced in the whole system. It is very common in disease of the womb for a female to become anasarca, even when there has been no great flooding; and it is likewise common in diseases of the spleen and the liver for the same thing to occur. You might suppose, *a priori*, that there is an obstruction to the blood in these instances, but the supposition is often unfounded. Obstruction in the liver and spleen ought rather to induce diarrhoea, or haemorrhage from the mucous membrane of the alimentary canal. In the case of disease in the kidney, at least, obstruction will not explain it. We cannot explain why the whole body falls into a state of dropsy unless from the whole system becoming cachectic through the renal disease, or the disease of the kidney being a part only of a generally depraved state of the habit.

If the kidney be organically affected, or have great congestion of blood, or an inflammatory state, I believe the urine is generally albuminous; but I do not think that the circumstance of the urine being albuminous is, on the other hand, a proof that the kidney is in this state; at least, in a state of organic disease. Because I have seen so many persons cured of dropsy, and restored to perfect health, who had albuminous urine; and if the kidney had been originally diseased, we can hardly suppose that that would have been the case; nor could congestion, and inflammation of the kidney, be supposed, because there were no signs of such affections. I have continually seen

albuminous urine in cases of dropsy without any reason, first or last, to suspect disease of the kidney, and I have seen the dropsy completely cured. I think, therefore, that although it is possible that in disease of the kidney, and in congestion of that organ, the urine may generally be albuminous, the converse cannot be said,—that if the urine be albuminous we cannot necessarily conclude that the kidney is in these diseased conditions. When the disease, however, is of the nature that it was in this case—inflammatory, there are sure to be general marks of inflammation, or marks of inflammation of a particular part. I should not have supposed here that there had been a general inflammatory state of the system, for the pulse was exceedingly weak, but there was decidedly inflammation in one part, that is, of the peritoneum.

When dropsy is of an inflammatory nature you will generally see fulness about the head, or an inflammatory state of the chest, or an inflammatory state of the abdomen, and frequently we have all three parts in an inflammatory state. You frequently see the head, from its fulness, become oppressed; the patient complains of drowsiness, or a tightness of the forehead, as though it were bound with hoops, giddiness, or headache; or if you desire him to make a deep inspiration, you find soreness of the chest, and on listening at the parietes you discover a rattle; or if you examine the abdomen you find tenderness some where. These symptoms are sometimes inconsiderable; but you will generally perceive inflammatory affection either of the head, chest, or abdomen; perhaps the patient will not mention them spontaneously, and therefore it is necessary that you should inquire after them. There was a case admitted a fortnight ago precisely of this character.

William Harden, *æt.* 42, was admitted on the 4th of November. He had been ill three weeks, and it was found that he had headache and drowsiness, likewise dyspnoea, cough, soreness of the front of the chest internally, and sonorous rattle. These two parts were affected—the head and the chest; not that the inflammation of these parts was sufficient to cause dropsy—that was out of the question, but in the inflammatory state of the system these particularly suffered. He had anasarca, at least oedema as high as the hips, and the urine was not found to be albuminous. He was bled to the extent of a pint, and purged with supertartrate of potash: the blood was not found to be buffy. He was again bled to the same extent, when the urine was found albuminous and the blood buffy. He is steadily improving, and swells now no higher than the ankles.

This leads me to consider the rule for treating the disease antiphlogistically or not. If the patient have been in perfect health,

and suddenly seized with dropsy, you may presume that it is of an inflammatory nature; you will, however, satisfy yourselves of this by ascertaining whether the complaint arose from cold; whether it arose just as inflammation does every day—from the application of cold, especially when united with moisture, and when the body was overheated. Almost all these cases may be traced to this circumstance. Another mark is, that the swelling begins in the face, or occurs as early in the face as elsewhere, the face being particularly exposed to a change of temperature. You will find, in the great majority of instances, that inflammatory anasarca begins in the face, or at least the face swells as early as any other part. Another circumstance is, that the pulse will justify you in bleeding. Perhaps the pulse will be full and strong, but whether it is so or not, you may have reason, from the circumstances that I have mentioned, to consider the case inflammatory: although the pulse will not indicate bleeding, it will justify that measure. The observation of the pulse is often very important, and though it will not lead you to resort to bleeding, yet knowing that the symptoms indicate the loss of blood, it may justify you in abstracting blood. This was the case with this man. In the instance of the girl, I did not infer the propriety of bleeding from the nature of the cause of the complaint. She was too weak to give an account of the origin of her disease, neither could I learn whether it began in the face, and the pulse would certainly have disinclined me from bleeding; but I found decided inflammation of one part of the body, such as made me desirous of abstracting blood one way or other, and if there had been no dropsy—if there had been no effusion at all—the case would have required the treatment of peritonitis. You therefore see that you may suspect the inflammatory nature of the case from its being acute, from its beginning in the face, the patient having been previously in good health, and the pulse being one of any thing but debility, and, I may add, from the circumstance of the urine not being diminished at all, or being actually increased, for in this sort of dropsy the urine, so far from being diminished, is not only in general of its natural amount, but sometimes increased. You may be sure of the propriety of treating them as inflammatory either by finding the pulse really of that nature—strong, quick, and full; a pulse that would lead you to bleed, whatever might be the disease; or, in other cases, not from a history of the disease—not from any peculiar state of the face or the urine, nor from the state of the pulse—but you may infer the propriety of treating them antiphlogistically from the existence and severity of some local inflammation, which itself alone, without any dropsy, would point out the propriety of antiphlogistic treatment.

That was the case in this girl. In the man's case there was not much local inflammation, so as to make bleeding at all advisable, but he had been previously in good health, his pulse was fuller than that of the girl's, and these two circumstances proved that there must be an inflammatory state of the system, though short of actual inflammation in any one part. The treatment was equally successful in both cases.

We have been informed that the state of the urine is a sure guide to the use of bleeding. We have been told that the quantity and firmness of the coagulum of the albumen of the urine is usually proportionate to the marks of inflammation. It is not asserted that the presence of albumen can only occur where there is inflammation, but it is acknowledged that in an opposite state, where there is great weakness of constitution, where bark will cure the disease, albumen may appear in the urine. It is said, however, that when the albumen in the urine is of considerable quantity and firmness, making a firm coagulum on the application of heat, that there are usually proportionate to this marks of inflammation, and that a correct guide to venesection will be found in the firmness, copiousness, and early appearance of an albuminous coagulum in the urine.

Now I am perfectly satisfied that this is incorrect. In the man's case there was no early appearance of albumen: when the urine was first examined, there was no albumen in it, and the albumen did not appear till one venesection had taken place, which had been of great benefit to him. Neither, indeed, did the buffiness of the blood occur till after the first bleeding. Then, as to firmness, the albumen did not coagulate into a solid mass, but merely formed a number of flocculi throughout the fluid. I have certainly seen many cases where there was no albumen at all in the urine during the whole of the disease, and yet bleeding was indicated, and positively cured the patient. Although I have very seldom seen the albumen form a firm coagulum in the urine, yet I have seen instances out of number yielding entirely to venesection. I therefore do not place reliance on the state of the urine, but I place my reliance for the propriety of bleeding upon the history of the disease, the state of the pulse as to whether this will justify it or not, and upon the presence of local inflammation. It is proper, however, to say that the writer to whom I have alluded, allows that the limits of venesection will be ascertained from the state of the blood, and the relief of the symptoms; but also, he says, from the improvement of the urine. Nevertheless he mentions the fact, that firmness, copiousness, and early appearance of albumen in the urine, is the sure indication of venesection. As I should not hesitate to direct the treatment of dropsy,

whether there was any albumen in the urine or not, from having continually cured the disease by bleeding, when there has been no albumen, and also when the albumen that was present formed no firm coagulum; so, on the other hand I must say, that I have seen the urine full of albumen—I will not say firm—where venesection was a measure quite out of the question. I speak decidedly on this point, because I have made it a matter of considerable observation. I feel that I have good grounds when I state, that in dropsy it is always right to ascertain whether the phlogistic diathesis is present, and to look out for local inflammation. If you do this, I am satisfied that, without an examination of the quality of the urine, without knowing whether it contain albumen or not, you will never be mistaken as to the treatment to be adopted.

I gave this girl no diuretics; she took mercury, which I gave on account of the peritonitis, and she took opium to check the diarrhoea; but she took no other medicine whatever, and yet all the secretions came round. The effusion into the cellular membrane, and the peritoneum, both arose from an inflammatory state, and completely subsided when this ceased.

There have been no *post mortem* examinations, gentlemen, this week; but a friend of mine in the country has been so kind as to send me a heart, which he took out of an old man, and which furnishes a very fine specimen of cardiac disease. I have not seen it before. It has been opened during lecture by Mr. Norblad (the curator to the Museum); but it is an instance of extreme disease.

I will begin with the right side of the heart: there appears to be no disease here. You are aware that the right side of the heart is much less frequently diseased than the left. However, the left ventricle exhibits a terrible, or a beautiful—just whether you please to speak as men or as pathologists—specimen of disease. In the first place there is immense hypertrophy; the walls are nearly as thick again as they should be; the cavity is about the natural size, or if there be any alteration, it is slightly diminished; then there is most extensive ossification all over the sides of its two openings. The ring of the mitral valve is one rugged circular mass of bone. The curtain of the valve is free, and the opening natural. Continuous with this is the ossification of the aortic valves. All three are bony; the sacs of them look as if distended by pieces of walnut, and the opening is reduced to a mere three-cornered chink. The aorta has many large collections of rugged bone upon its inner surface. The bony matter is deposited originally, I believe, under the inner coat; the inner coat

cracks, and the bone is then exposed, so that the blood runs over the bare bone. The blood could have experienced no difficulty in passing from the left auricle to the left ventricle, but had extreme difficulty in escaping from the left ventricle into the aorta. Thus the efforts required of the left ventricle are sufficient to account for its extreme hypertrophy, the heart, or any one muscular part of the heart, growing large, like any voluntary muscle, by exertion. You will sometimes see the left ventricle very much hypertrophied, when there has been no obstruction to the course of the blood, and no disease of the aorta.

When we see the present kind of ossification occur in old people, it does not appear to be the result of inflammation, but of a degeneration of structure. In old age there is a general tendency to induration, without any marks of inflammation; and when we observe bone, as in the present instance, all that we can say is, that the parts have had a tendency to secrete bone. In young persons these transformations commence generally with inflammation; inflammation leads to induration, induration to the formation of cartilage, and the cartilage subsequently becomes bone. In old age the change appears generally to be entirely independent of inflammation.

I cannot tell what peculiar symptoms were present in this case, as I believe that the region of the heart was not examined by the ear. If my memory is correct, the letter which I received states that the subject was nearly 80 years of age; that within the last six years he had walked very great distances, and died apparently of old age, no particular disease having appeared except dropsy just before the last. I think if the chest had been listened to, there would have been a strong bellows sound heard, with, or most immediately before, the pulse, on account of the difficulty the blood had in getting out of the left ventricle into the aorta. Without the narrowness of the aortic opening, the immensely thick left ventricle would have driven the blood most impetuously to all parts, given an immense pulse, produced dyspnoea, and perhaps caused apoplexy, hæmorrhage, and dropsy, from forcible distention of the arteries; and without the immense hypertrophy, the narrowness of the mouth of the aorta would have caused such obstruction that there would have been a most feeble pulse, and extreme dyspnoea, hæmorrhage, and dropsy, from the obstruction of blood in the lungs and whole venous system. The absence of inconvenience may be explained thus, and by the probably very slow and proportionate progress of the several organic changes.

ST. GEORGE'S HOSPITAL.

CASES OF FRACTURE, OR OTHER INJURY
ABOUT THE PELVIS.CASE I.—*Fracture of the Pelvis—Rupture of
the Urethra—Cure.*

GEORGE PLUMMER, *æt.* 49, a carter, admitted at 11 a.m. on the 18th June, 1830, under Mr. Keate. At 9 a.m. he was severely jammed between the wheel of his cart and a post. He sank down, and has since been incapable of using his lower extremities to any extent. On admission it was clear by the crepitus on moving the thighs, and attempting to move the pelvis, that the latter was fractured in more than one place. A projecting edge of bone was felt on the dorsum of the left ilium; there was some ecchymosis about the pelvis, but more on the outside of the left thigh; some blood had issued from the orifice of the urethra.

He was placed on Earle's bedstead, and the water drawn off by a gum catheter; it was bloody from first to last, but most blood came away at first, and the catheter was obstructed in a laceration of the membranous part of the urethra. A belt was fastened round the pelvis.

In the evening, the water, when drawn off, was dark and bloody, and there was more heat of skin. Salines were prescribed. On the 19th the water was thick, loaded with the lithate of ammonia, and muddy looking. He had pain in the pelvis on coughing, which was troublesome; aspect rather anxious; pulse frequent, rather wiry; no motion from the bowels. A camphorated lotion was rubbed on the ecchylosed parts. On the 20th the urine was pretty clear; the pyrexia still continued; antimony was added to the salines. On the 21st he was better; on the 22d there was again a little blood in the water. The catheter had been hitherto kept in the bladder; it was now removed, and the patient made water once or twice without it.

At 1 a.m. of the morning of the 24th he had a rigor, succeeded by heat, but no nausea. The water drawn off was of deep colour, but free from blood. At 11 p.m. of the 25th he had another rigor, not followed by any nausea or pyrexia. After this date the rigors did not return. By the 20th July he could often pass his urine without the assistance of the catheter. On the 10th of August he began to walk about, and soon after this he was discharged cured. He said that his bones felt stronger than before the accident. We saw the patient a few days ago (Nov. 12th) in robust health. He has a little lameness.

CASE II.—*Injury of Pelvis—Inflammatory
Swelling in left Groin, threatening Suppuration—Cure.*

Samuel Bevan, *æt.* 25, admitted Septem-

ber 18, 1830, under Mr. Brodie. On the preceding day he was kicked in the lower part of the belly by a horse, after which he was unable to walk. A surgeon applied leeches; he made water with pain, but it contained no blood. When admitted he complained of much pain about the pubes and lower part of the belly, the integuments of which were discoloured. No fracture was discovered. The catheter was introduced, and some high coloured, but not bloody, urine drawn off. He was placed in bed, with pillows under the knees, and twenty leeches were applied to the abdomen. On the 20th he had slight shivering; on the 21st much pain in the hypogastrium and loins.

V.S. ad 5xij. II. Sennæ.

On the 22d he could make water without the catheter, but this was passed daily. In the morning of the 24th he had a rigor, followed by much tenderness of the hypogastrium and by pyrexia. He had passed a small coagulum in his urine with much pain, which indeed he experienced at all times.

Hirud. xiv. Abdomini.

On the 25th there was more blood in the urine; the pain had been relieved; he was placed in Earle's bed.

Hyd. Sub. gr. v. h. s. II. Senn. cras.

In the night he had another rigor, and on the following morning a slight chill, with some sickness. He was ordered salines with ammonia. In the morning of the 27th he had another severe rigor, with nausea; the countenance was very anxious. On the 29th there was much pain in the belly, with shooting down the leg and thigh; there was headache, hot skin, tongue dry, and rather brown in the centre; pulse 96, soft. At 1 p.m. he had a very severe rigor. On the 30th he was seized with some cough and pain in the left side of the chest, to which a blister was applied.

Oct. 2d.—Pain relieved by blister; has had slight hæmoptysis; has tenderness in the left iliac region, and tumefaction, as of matter forming there; pulse 66; tongue quite clean.

In the night of the 7th he had two rigors, followed by pyrexia; the tumefaction in the groin was increased, but there was no fluctuation. He was ordered carbonate of ammonia, with tincture of hyoscyamus and camphor mixture, twice daily. Since the 7th October he has had no return of the rigor, the tumefaction is scarcely to be felt, and the patient's health is good. On the 5th he was removed to a common bed.

CASE III.—*Injury of the Pelvis—Laceration
of the Urethra—Cure.*

George Frost, *æt.* 11, admitted Oct. 11, 1830, under Mr. Hawkins.

At 8 o'clock this morning he was run over at Putney by a horse and cart not heavily laden. The wheel appears to have passed over the pelvis, and there is reason to think that he was lying on his side or belly at the time. Soon afterwards some blood issued from the orifice of the urethra, and he was unable to make water or stand upon his legs.

On admission at 5 p.m. no fracture of the pelvis could be felt, but he complained much when it was moved, and particularly when pressure was made on the pubes. There were marks of contusion and ecchymosis, chiefly above and about the right natis and left hip. He could not make water. The catheter could not be passed into the bladder, partly from violent spasm of the muscles in the perineum, partly from the instrument hitching in some laceration on the left side of the urethra beyond the bulb, whence bleeding readily occurred.

Tr. Op. *xxx.* Fetus abdomini.

Knees and feet bound together; double inclined plane.

Mr. Hawkins attempted to pass the instrument in the evening, but failed. Next morning it was introduced, and bloody acid urine drawn off. In the afternoon the attempt again failed. On the 27th it was got into the bladder, and turbid, porter-coloured, acid urine, mixed with blood and some of the salts of the urine, evacuated. The water did not pass until pressure was made above the pubes, and then not in a full stream.

In this state the boy continued for several days, not passing his water without the assistance of the catheter, and then only when assisted by pressure above the pubes. The urine was loaded with the lithate of ammonia, and contained some blood. On the 1st of November he could make water without the introduction of the instrument, and on the 6th, no symptoms of injury remaining, he was allowed to get up.

He was discharged on the 10th.

The preceding cases prove that laceration of the urethra from injury is not necessarily followed by serious consequences, not even when complicated, as in the first case, with fracture of the pelvis. Much, of course, must depend on the nature of the laceration and its site. If in the upper surface of the membranous portion, the laceration will probably be complete, and the urine will escape into the cellular membrane behind the pubes. We have seen such a case end fatally. But the laceration of the nates of the urethra may be incomplete, or the urine may escape so slowly into the neighbouring cellular tissue, as to allow a barrier of lymph to be thrown around it, and prevent extensive mischief. At all events it is certain

that cases of laceration of the urethra from fractured pelvis, or from other causes, will not unfrequently do well under careful management. Rigors are not to be looked on with so much alarm after these as after some other injuries, for whenever the irritable urethra is concerned, rigors are occasionally observed without any serious consequences following.

EDINBURGH INFIRMARY.

Apoplexy—Disease of the Aorta.

Nov. 8.—J. Hay, æt. 40, coachmaker, admitted. Has paralysis of the muscles of the right side of the face and orbicularis of the right eye; power of the masseter and temporal muscles does not seem to be impaired. The tongue, on protrusion, points to the right side, the mouth being turned to the left; the sensibility of the right cheek is perfect, that of the left somewhat impaired, with sensation of numbness, which the patient states he observed after the extraction of three diseased teeth from the left jaw. Has double vision at times, and the sight of the right eye is permanently weak; pupils are contracted, that of the right side more than of the left; they are sensible to the stimulus of light. He is not subject to headache, but has occasionally vertigo and tinnitus aurium; no deafness; no paralysis of any part of the extremities. There is some feeling of numbness, with loss of sensibility to the impression of cold, in the right hand, extending as high as the wrist. Bowels regular; pulse 92, full; tongue whitish, moist; no thirst; appetite good. States that two years ago he was affected with dropping of the lid of right eye, which continued about a fortnight, and was removed by blistering. There does not seem to have been any other symptom at that time referable to diseased action in the head. Three months ago had severe head-ache, from exposure to cold; states that he had no delirium or paralytic affection at this time, but the exact nature of the symptoms cannot be ascertained. He was treated with leeches, blistering, and purgatives, and was ill during four weeks. Shortly after had fever—no severe local affection. Present symptoms began six days ago, paralysis having first attracted notice.

Tt. V.S. ad. Abradt. capillæ et lavatur caput nocte mane queaqua frigida. H. s. sumat Bol. Jalap. Comp. et cras mane Haust. Cathart.

9th.—Bled with immediate sensible effect. Three stools.

Nuchæ applic. Emplastrum vesicatorium. Habeat Bolum Jalapæ Comp. h. s.

10th.—One light-coloured liquid feculent stool. Blister rose well; free from vertigo

or tinnitus; other symptoms as before; pulse 100, of good strength.

Sumat Pilulas Aloeticas duas mane et vespere.

11th.—No change.

12th.—Two stools, feculent-formed, somewhat clay-coloured; some vertigo while sitting up last night; pulse 100, rather weak; inflammation of right eye and partial paralysis continue.

Sumat Pil. Hydrarg. ii. mane et vespere.

R Sulph. Zincij gr. vj.

Tr. Opii ʒj.

Aq. ʒiv. solve fiat Collyrium.

13th.—At two A.M. attention of nurse was attracted by the patient snoring loudly; on being spoken to, he answered questions pertinently, but with difficulty, complaining of loss of power of left arm and side; said he was free from head-ache; pulse 76, rather weak, compressible, and labouring. Was bled to ʒvi. with relief to breathing; half an hour after became comatose, in which state he has continued since. Respiration at present very labouring, with frothy mucus passing from the mouth; alternate inflation and contraction of cheeks. No stool. Some croton oil was given about an hour and a half ago. Pulse about 120, rather weak and soft; muscles of all the extremities seem relaxed; left eyelid droops; some languid motion of eyeballs.

Injeciatur. Enema Purgans. Abradant. capillæ et tegatur totum caput vesicatorio. Cruribus applicent sinapismi.

14th.—One large stool from enema. Symptoms continued without change through the day. Croton oil was given in the evening, but did not operate. Died at ten o'clock, blister not having risen.

Secitio Cadaveris.—Head: veins and sinuses turgid. No serous or sanguineous effusion under the membranes; substance of the brain of a fleshy colour, and presented numerous red points on the cut surfaces. Very slight serous effusion into the lateral ventricles, and the plexus choroides more turgid than natural.

Coats of the basilar thickened—within the vessel a considerable coagulum; at one part the calibre of the vessel was plugged up by a deposit of coagulable lymph.

Thorax: lungs and heart healthy.

The descending aorta, about an inch from the arch, presented an unusual specimen of disease; on the inner surface there were numerous white elevations, soft to the touch, smooth—some of these were abraded on the surface, and others, which were also of a greater size, seemed to have ulcerated and to have poured forth blood, which gave a dark colour to the diseased growths—some of these were as large as a finger nail.

A case in some measure analogous, occurred lately in the Female Clinical ward. A woman, who was in the house for an old cutaneous disorder, had some slight pectoral symptoms; suddenly there appeared symptoms of great oppression of the nervous system, and within 60 hours she died comatose, having been previously blind for 12 hours. On dissection, little or no disease could be detected in the head: the condensation of the lungs was the only remarkable morbid appearance.

DR. DOMEIER.

This gentleman has addressed a letter to the Editor of the Medical and Physical Journal, stating that he is not the author of a paper signed "Justus," (attacking the medical examinations at Cambridge) which appeared in the above periodical about two years ago. In compliance with a request which has been made to us, we give farther publicity to his de ial.

PRACTICE OF MIDWIFERY.

At the meeting of the Westminster Medical Society on the 20th ult., Dr. Granville entered into an elaborate detail of the proceedings of the Obstetric Society, describing very fully the various steps they had taken, with a view to ameliorate the practice of midwifery in this country; and the little assistance, or even encouragement, they had met with from the corporate bodies, excepting, however, the Society of Apothecaries. As the particulars were laid before the public by us several months ago (see the paper of Dr. Ramsbotham, the secretary to the society, in our Number for June 12), we conceive it unnecessary to recapitulate them on the present occasion. The following resolutions were then proposed by Dr. Granville, and adopted by the society:—

"That it is the opinion of the Westminster Medical Society, that the present state of the practice of midwifery, unprotected as it is by any legal enactment, calls for the interference of the Government.

"That the endeavours of the Obstetric Society, with a view to rectify this defect, are deserving of the approbation and support of the profession in general, and of this society in particular."

NOTICES.

Dr. Haycraft's paper, and various others just received, next week.

ERRATUM.

In our last leader, concluding sentence, after "depreciate," *dele* "from."

W. WILSON, Printer, 57, Skinner-Street, London.

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SATURDAY, DECEMBER 11, 1830.

ILLUSTRATIONS
OF
DR. CORRIGAN'S THEORY
OF THE
MOTIONS AND SOUNDS OF THE
HEART.

BY W. T. HAYCRAFT, M.D. &c.

PART II.

THE application of physiological principles to explain disease is difficult, nor would I have undertaken this part of my task had not the way been so well prepared for me. Dr. Hope, in his elaborate essay, contained in *Med. Gaz.* No. 146, has endeavoured to support the old doctrine by cases and authorities, which he has doubtless selected as fittest for the purpose. On attentively examining them, however, they appeared so little adapted to the end intended by Dr. Hope, and so adequate to establish the new doctrine, that I determined to use them for that purpose, and to follow nearly the same order in their application to some of the conditions of heart disease.

Simple Dilatation of the Ventricles.

This affection is discoverable by diminished impulse and increased sound at the chest.

For the purpose of explaining these symptoms, it will be sufficient to understand and apply the two following rules:—

RULE 1st.—The impulse given by a moving fluid is increased more by increased velocity than by increased quantity. (This is an acknowledged law.)

RULE 2d.—The intensity of a sound produced by a moving fluid is increased more in proportion to the suddenness of the arrest than to its quantity or velocity. (See part 1.)

Taking it for granted, as we have already shewn, that one of the conditions of the rush of blood into the ventricle, which we have concluded to be the cause of the impulse, is the active force of the diastole of the ventricle, it will follow, that if its active force is lessened, the velocity, and also the impulse, is lessened: this is the case in simple dilatation, unless a degree of hypertrophy is conjoined. But perhaps the velocity is more affected by the increase of the cavity, through which, unless we suppose that the quantity circulated through the heart is increased in proportion to the cavity, the current must flow, *ceteris paribus*, with diminished velocity, and therefore with greatly diminished impulse, agreeably to rule 1.

That the dilated ventricle should, according to Laennec, give a loud, short, and clear sound, is easy to understand from the application of rule 2 to the conditions present in this affection. For it is to be believed that the dilated heart is more supported, or even confined by the pericardium during the extreme diastole of the ventricle than when in a healthy state. Now it is at this extreme diastole, and when the pericardium offers a sudden and firm resistance, that the sudden arrest of the fluid takes place, and therefore a more intense sound, agreeably to rule 2; and this sound should be loud, sudden, and sharp, agreeably to the description of Laennec. This arrest is not so sudden in the healthy heart, in which we do not suppose that the pericardium ordinarily re-

strains the motions of the heart. (See experiment 3, part 1).

Simple Hypertrophy of the Ventricles.

Laennec's description of this affection admirably illustrates one of our principles, viz. that the diastolic action of the ventricle is the main cause of the propulsion of the heart, which produces in health a *nus*, but in disease a *heaving* of the chest. It is acknowledged that an hypertrophied ventricle performs its action more vigorously, though more slowly, than in a state of health. This will occasion an increased and more lengthened propulsion, (see conclusion 7, 1st part), while the diminished rapidity will occasion a less intense impulse, agreeably to rule 1. The words of Laennec, as translated by Dr. Hope, are, "the impulsion (our propulsion) is ordinarily sufficiently strong to heave the head of the observer in a very sensible manner; and sometimes it is so strong as to produce a shock disagreeable to the ear. *The greater the hypertrophy, the more time that heaving takes for its performance.* When the disease is carried to a high degree, one evidently perceives that it takes place with a gradual progression; it seems as if the heart swells and applies itself to the walls of the chest, at first by a single point, and then by its whole surface, and that it next sinks back (*s'affaise*) all on a sudden." This description little agrees with the idea of a systole of the ventricles going on at the same time with all this swelling of the heart and heaving of the chest. Dr. Hope, who makes the same quotation, wisely refrains from reasoning upon it with reference to the doctrine he supports. It however strongly supports our conclusions 3 and 7. Laennec continues—"In hypertrophy, carried to an extreme degree, the contraction (extreme diastole) of the ventricles, produces nothing but a shock, without sound." Here Dr. Hope takes occasion to turn his battery against Dr. Corrigan, whose explanation may in part, at least, be admitted as one cause of the diminution of the sound, namely, the increased *thickness* of the parietes, which "will only transmit, *un son étouffé*, a smothered sound." To this Dr. Hope answers, "now it happens that *dense media* are better conductors of sound than, &c." Surely Dr. Hope should know the difference between thickness and density.

If he should not, which I do not believe, there must be a thickness some where or other.

The application of our general principles to explain the phenomena in hypertrophy is simply this—that the propulsion, as distinguished from the impulse, being mainly caused by the diastolic action of the ventricle, is, by the latter being rendered stronger though slower, also rendered stronger, slower, and more even. The impulse, by defect of corresponding power of the auricle, whose action is quick, and unable to move the blood with its usual velocity, is thereby lessened. The sound also is diminished by the elastic slowly moving parietes not producing so sudden a check which is conditional to the loud and sharp sound. (See experiment 7, part 1). Add also the explanation of Dr. Corrigan, just referred to. By-the-by, if Dr. Hope thinks that a thick fleshy mass will easily transmit the heart sounds, let him make use of the thick fleshy part of his arm for a stethoscope, and he will learn something from it.

Hypertrophy with Dilatation.

We will now attempt to confirm our principles by applying them to Laennec's description of this disease. He says, "the signs of this affection are a compound of those of hypertrophy and dilatation. The contractions (should be expansions) of the ventricles give at once a strong impulse and a well marked sound. That of the auricles (hypothetical) is loud." Here it must be confessed that Dr. Corrigan, on his own notion of the contraction of the auricle, being the efficient cause of the expansion of the ventricle, is unable to give a satisfactory explanation, and he is therefore obliged to doubt the correctness of Laennec's description. Dr. Hope then seizes the occasion, and exultingly pronounces the difficulty "as subversive at once of the whole theory." Let us, however, calmly consider the question. We will first hear Dr. Corrigan: he says, "if we admit these signs to be correctly stated, there will be in one of them an objection to our explanation of the heart's action. The loudness of the sound is in accordance with, and in support of our opinions, depending, as we assert, on the size of the cavity But the strong impulse, if it were invariably present, would be an objection to our view; for unless the auricle were at the

same time hypertrophied, our explanation would not account for it." Now if Dr. Corrigan had made our distinction between the propulsion and the impulse, he would have perceived that the former, being chiefly produced by the diastole *per se*, would not require an hypertrophied auricle to explain the increased action. In this case he needed not have doubted the correctness of Laennec's description, nor have given such an apparent occasion for Dr. Hope's exultation. When Dr. Corrigan states, that "the contraction of the auricle is the active force in producing the impulse," Dr. Hope replies, with some force, "this is amazing—that the feeblest portion of the heart should be the sole spring of its most violent actions." Let us then admit that the ventricular expansion, though assisted doubtless by the auricular contraction, is conditional also on its own muscular action, and then it will appear evident that its hypertrophy will, by increasing the force of the diastole, increase in the same degree the propulsion against the side.

Again, Dr. Corrigan's explanation of increased sound in dilatation, or mine, may be indifferently received. The chief difference is, that the former is a more popular mode of expressing the fact, namely, that a fluid rushing into a large cavity makes more noise than rushing into a small one. Mine is, that the dilated heart being more confined by the pericardium, gives a more sudden check, &c. The simplest explanation, however, of the phenomena, and one which consists with the two former, is, that the heart in this affection must be considered as a larger heart, and therefore, *ceteris paribus*, its actions have greater force.

Hypertrophy of Auricle, with Flaccidity of Ventricle.

Dr. Corrigan cites a case of this rare affection from Bertin. I am sorry that I have not the original notes by me. The case is shortly this: hypertrophy of the auricle, with ramollissement of the ventricle, with the exception of one hypertrophied spot, yet throughout the whole disease there was a most inordinate impulse. The pericardium was also found to be adherent. This case very strongly supports that part of Dr. Corrigan's theory which supposes that the systole of the auricles causes the

diastole of the ventricles and the impulse at the chest. We have here an hypertrophied auricle, with great impulse. The old theory, which supposes the ventricular systole to be the cause of the impulse, would, to the softened and feeble state of the ventricle, have assigned a feeble impulse, yet the contrary was the fact. This case cannot be explained on Dr. Hope's principles; and that gentleman, therefore, very discreetly omits all notice of it. Till, therefore, it can be shewn how a feebler ventricle can, *per se*, produce a stronger impulse, the old system must be considered as non-suited. The increased sound in adhesion of the pericardium I have before explained as arising from the sudden arrest of the blood from its resistance. I have the authority of Dr. Hope in support of the idea, that the noises of the heart are occasioned by the check given to the motion of the blood within the ventricles. In fact, if he had followed up the spirit of the following quotation, we should have agreed perfectly: he says, "thus in a healthy state of the organ, the sound is loud, brief, and clear, because the blood, shooting through a wide aperture, is abruptly checked *when the diastole is completed*." Now the Doctor will allow that the sound and the impulse at the chest are perfectly coincident, and therefore that the impulse is coincident with the completion of the diastole. Now with what consistency can he state in his conclusions that the impulse is *simultaneous* with the systole of the ventricles? Both of these opinions cannot be correct; and he must, if he be candid, acknowledge himself to be wrong in one of them. It is astonishing how near even a sensible man may arrive at the truth without perceiving it. He continues: "In dilatation it (the sound) is louder, because the quantity of blood entering it (the ventricle) is greater, and from the thinness of the walls the check is more sudden. In hypertrophy the sound (he might have added the impulse) is weak and dull, because the unyielding thickness of the parietes renders their expansion by the fluid more difficult and gradual; consequently the re-action generating the sound is more languid." This is all excellent:—a zealous supporter for the new theory could not have pleaded better for it. The quotation just made also contains a full proof that the first sound is caused by the diastole,

and not by the systole of the ventricle; for the Doctor acknowledges that it occurs *when the "diastole is completed;"* and he must also acknowledge that it took place *before the systole is completed.* Now a cause must be complete before its effect is produced; but in the instance before us, according to Dr. Hope, the effect (the sound) is produced before the cause (the ventricular systole) is completed.

The above paragraph would more probably have belonged to the first part of this paper, where it would have been, had I met the quotation of Dr. Hope earlier.

Auricular Valvular Disease.

Had I searched for cases of auriculo-ventricular valvular disease, for the purpose of illustrating Dr. Corrigan's theory, I could not have selected one better adapted than one of Dr. Hope's, which he has published for the purpose of overthrowing it, and of shewing "that the ventricular contraction is the cause of the impulse;" and it is singular that even the words of Laennec, which he quotes on this occasion, oppose rather than support him in his position. The case referred to, as it is short, I shall insert, with remarks.

CASE.—Christian Anderson, æt. 42. *Pulse imperceptible*; impulse was an irregular succession or undulation of the chest. First sound *was a very loud bruit de lime*, or that of sawing, obscured and subdued. It commenced abruptly with a flap. The flap of the auricle, (second sound) short and flat, *was scarcely audible* at the conclusion of the ventricular sound. Same sounds on both sides of the heart, but more subdued and indistinct, and subdued on the left."

Diagnosis I shall omit, as it was incomplete.

Section.—The auricles and ventricles dilated, not thickened; tricuspid and mitral valves (passages?) irregular cartilaginous rings; pulmonic and aortic valves natural, except an enlargement of the corpora sesamoidea of the latter." To this case are annexed the following remarks: "as the pulmonic and aortic valves were equal to the discharge of their functions, the sound proceeded from the regurgitation through the auricular valves. Hence if bruissement be heard *during the ventricular contraction*, (?) we are not necessarily infer

that there is disease of the aortic or pulmonic, rather than of the auricular valves." Now even this explanation seemed to the observers so little satisfactory, that, as we are informed in a note, it was thought proper to attach the names of six physicians to the minutes of the case. Why?—because the section nullified the diagnosis, and falsified the received theory. On the other hand, let us reform the explanation agreeably to the principles of the new theory, and the difficulty will vanish. Thus, "as the pulmonary and aortic valves were equal to the discharge of their function, the sound could not proceed from regurgitation through the auricular valves, because the sigmoid valvular passages were quite free, while the auricular passages were much contracted. Hence if bruissement be heard *during the ventricular expansion*, we ought to infer that there was disease in the auricular, and not in the aortic and pulmonic valves." With such reasoning, the case needed not to have been attested, and dissection would have proved its truth.

It is somewhat curious that Dr. Hope, in his diagnosis, should have altogether omitted mentioning disease of valves, when he had the authority of Laennec before him, in which it is stated that "the bruit de soufflet attends systole of the ventricle when the induration occupies the sigmoids of the aorta." Note, this opinion is evidently grounded on anatomical, and not on theoretical considerations. Now, from the symptoms as related by the author, the bruit de soufflet accompanied the first sound, which the old theory supposes to be synchronous with the systole of the ventricle. Therefore the diagnosis on the old doctrine should have been "induration of the sigmoids of the aorta." This, however, was not the fact. How is the difficulty to be obviated? How! but by a new discovery, which though unknown to Laennec, "must be known to most experienced auscultators." This important discovery is, "that the sound proceeded from the regurgitation through the auricular valves ... during the ventricular contraction." The Doctor says, "that it is one of the few oversights committed by this wonderfully accurate observer: he, 'Laennec,' did not discover that bruit de soufflet attends the systole of the ventricles when the auricular valves are contracted."

This hypothetical discovery will, I fear, never be verified. Even supposing, in the case referred to, that the auricular valves were incapable of their function, which Dr. Hope has forgotten to notice; when we consider for a moment, we shall perceive that the parietes of the ventricle during its systole, in consequence of the arrangement of its muscular fibres, (which I recollect Professor Duncan admirably demonstrates) contracts in every possible way, so that this very narrowed auricular opening, even if deprived of its valve, would become itself a potential valve. In this state, then, what occasion is there to suppose a regurgitation from the ventricle into the auricle? Consider, besides, that the aortic and pulmonic passages were free, and the auricular ones obstructed. The intelligent reader must also be aware, that if there are two discharging orifices or passages—one large and free, the other very contracted—little fluid will escape from the latter, and that will be without impetus or noise. I do not deny the possibility, but I do not believe that in a contracted state of the auriculo-ventricular openings, with a healthy state of the sigmoid passages, regurgitation into the auricles, with noise, ever takes place; and even if regurgitation should take place, it would produce no bruissement in the ventricle, as I shall notice in treating of sigmoid valvular disease. But Dr. Hope, for the purpose of supporting his favourite theory, must shut his eyes against these plain reasonings. Laennec is to be accused of inexperience, a discovery without proof forced upon us, and his own, to him, anomalous case, must be attested by six physicians.

If the reader be not tired, I will add another argument to prove the high improbability that the bruissement in the case referred to, arose from regurgitation, and therefore during the systole of the ventricle. First, it will be allowed that the bruissement arose from the contracted state of the auricular passages; secondly, that a greater quantity of blood must have passed through the passages during the diastole than the systole of the ventricle, (allowing regurgitation to have taken place), for this plain reason, that the quantity regurgitated could be but a portion received into the ventricle during its diastole. Therefore there should have been two sounds—one greater, caused by the

greater quantity rushing through the contracted passage into the ventricle, the other less, caused by the regurgitation of the less quantity through the same passage; but this did not take place.

In other respects, also, the case ill supports the old theory, *c. g.* It states that the *pulse* was *imperceptible*, yet that the first sound “was a very loud bruit, &c.” How could the systole of the ventricle, which the old theory supposes to cause both, produce such anomalous effects? On the other hand, how much better, according to our doctrine, the second sound, our ventricular systole, which was “*scarcely audible*,” agrees with its co-effect, the pulse, which was “*imperceptible*!”

Sigmoid Valvular Disease.

It is rather singular that although Dr. Hope, in the last-mentioned affection, insists so much on the functional derangement of the auricular valves producing regurgitation, yet, in the present disease, contrary to all anatomical proof, he does not appear to admit of the possibility of any such derangement. He says, “it is plain that if the first sound were occasioned by the auricular systole, *i. e.* by *passage of blood through the auricular valves*,”—(by-the-by, the expression “by passage of the blood,” &c. is a false reduction, but on which the whole apparent weight of the sentence depends,)—“that sound could never be changed into bruissement by disease of the sigmoids, but it is incontestible, that disease of the latter valves does occasion bruissement of the first sound.” Now a disease of the sigmoids that would merely cause a narrowing of the passage, would produce bruissement in the aorta, and not in the ventricle; but if the disease should impair the function of the valves, regurgitation would take place, and bruissement would be heard in the ventricle; for the reader must be aware that *bruissement is only heard in a cavity into which a jet of fluid rushes, never in the vessel out of which it flows*. This argument will equally apply to shew the impossibility of bruissement in the ventricles being caused by regurgitation from the ventricles in disease of the auricular valves. If regurgitation should take place so as to produce bruissement, the latter would be heard in the auricles, and not in the ventricles. Bruissement in the ventricle, then,

from disease of the sigmoids, *must* be occasioned by regurgitation from the aorta, and it can happen only during the diastole of the ventricle. Now Dr. Hope informs us that in sigmoid disease the bruissement in the ventricle is the first sound; therefore, the first sound is coincident with the diastole of the ventricle.

It now becomes an interesting inquiry, how are we to distinguish contraction of the auricular passages from functional disease of the sigmoids, seeing the bruissement of both happens during the diastole of the ventricle, and coincident with the first sound? To this it may be answered, that there are two symptoms which may in a considerable degree be relied on. One is "an *irregular* succussion, or undulation of the chest," as Dr. Hope well expresses it, *instead* of the usual first sound; this belongs to contraction of the auricular passages, the contraction preventing the free rush into the ventricle necessary to the usual sharp sound. The other is, the peculiar *irregular* pulse belonging to functional disease of the sigmoid, at least of the aortic valves. I will now borrow from Dr. Hope's essay two cases, which are as well adapted to illustrate these two latter remarks, as the general doctrine we are supporting.

"Mary Andrews, in St. George's Hospital, May 9, 1829. *Impulse increased in force* and extent; left ventricular" (first) "sound *has* loud and prolonged bruissement. If permanent, it is from contraction of an orifice; and as the bruit de rape is very loud, it is probably from ossification. *Diagnosis.*—Organic disease of heart; ossification. *Section.*—Hypertrophy of left ventricle; cartilaginous rigidity of aortic valves; aorta beyond ossified, scaly, rigid, and contracted."

Now in accordance with the principles laid down, we should have concluded that as the *impulse* was increased in force, &c. there could be no auricular passage contraction; and also that, as the first sound *had* loud and prolonged bruissement, by which, I suppose, is meant a bruissement distinct from and coincident with the first sound, we might conclude there must be a cause distinct from, yet coincident with, the first sound. Now we know of no other that would fulfil these conditions than

as the bruissement was at the left ventricle, the diagnosis would have been "Functional disease of aortic valves," &c. But the history of the above case is rather imperfect, as the pulse is not mentioned, which would have assisted our diagnosis. The following case, however, which Dr. Hope borrows from Dr. Hewett, would have enabled us more decidedly to pronounce that there was diseased function of aortic valves:

CASE.—"Wm. Hidgley, in St. George's Hospital, April 7, 1830. *Impulse increased*, loud bruit de scie (sawing sound); pulse 120, very small and weak, *unequal*. *Section.*—Hypertrophy of the left ventricle, less of right. *Aortic orifice contracted by fibro-cartilage* to the size of a small pea." Dr. Hope has, without perceiving it, furnished us with one of these excellent diagnostic symptoms of functional disease of the sigmoids as distinguishable from contraction of the auricular passages, in a quotation already made, when he states, "thus, in a healthy state of the organ, the sound is *loud, brief, and clear*, because the blood shooting through a wide aperture," &c. Consequently, in contraction of the auricular passages, the sound will not be "loud, brief, and clear;" but functional disease of the sigmoids will not affect this sound; therefore, if there co-exist bruissement with the usual loud, brief, and clear first sound, there being no other assignable cause of the bruissement, there is functional disease of the sigmoids. All this is incompatible with the old doctrines.

Dilatation, Roughness of the Arch of the Aorta.

Of this affection I have little to state. I shall merely notice the observations of Dr. Hope as far as may be necessary to illustrate our doctrines. He says—"When the arch of the aorta is rough or dilated, it produces a peculiar sound, hoarse bruissement above the clavicles, *and this is exactly synchronous with the first sound of the heart*. Now as both these sounds are more or less prolonged, it is repugnant to reason that they can be occasioned by two successive causes." The reader will perceive that this description of Dr. Hope is somewhat analogous with Dr. Elliotson's observations on aneurisms, *whose pulsations were synchronous with the impulse at the chest*. In the first part of this es-

say, I have shewn that the pulsations of the aneurisms were caused by the *systole of the auricles*; and the analogy might warrant us in concluding, that the hoarse bruissement, at least the commencement of it, is also caused by the systole of the auricles. I think it will be found in this affection, that the bruissement will begin suddenly, immediately with the first sound, and then be "prolonged" either with less or greater sound than it begun with, till the second sound. With these views, then, we may safely say that the beginning of the bruissement coincides with the first sound of the heart; but we cannot properly say, with Dr. Hope, that it is synchronous with it. It strikes me very forcibly, that the most of the misconceptions of this gentleman, relative to the motions of the heart, arise from the loose sense in which he uses the words *synchronous* and *simultaneous*. When he states that the impulse is simultaneous with ventricular contraction, and that the latter is synchronous with the first sound, the expressions are evidently incorrect; for it is evident that an instantaneous noise or impulse cannot be synchronous with a continued process. On the other hand Dr. Corrigan has properly used the term *coincident*, to express the happening of an instantaneous action at the time of another longer action. It may, I believe, be safely concluded from the experiments of Dr. Corrigan, as well as from the views here attempted to be given, that the first sound and impulse are coincident with the termination of the ventricular diastole; and as there is no notable interval between the termination of the diastole and the beginning of the systole, we may so far indulge Dr. Hope as to say, that the sound and impulse are coincident with the beginning of the systole, (which I am sure that gentleman will not deny): the expression, at least, will be sufficiently correct for all practical purposes. Again, if the parties would but consent to split the difference, and say that the sound and impulse happen between the diastole and systole of the ventricle, the truth would be nearly as well expressed as by any form that could be invented.

Those who are acquainted with the essays of Dr. Hope cannot well dispute his talents. His sincerity in expressing his doubts of the completeness, and even the adequacy, of the theory he

supports, to explain the phenomena of heart disease, is highly praiseworthy when he says,—“Still, however, a few signs remained inexplicable on these principles; and the doubt which these threw over some of the finer diagnostic distinctions caused the whole subject of auscultation, as applied to the heart, to be regarded with an undue degree of scepticism.”

From the novelty, difficulty, and importance of the discoveries of Dr. Corrigan, with the facilities they will afford in detecting the diseases of the heart, the profession are under the highest obligations; but he has, perhaps, conferred even a greater benefit on the human race by his essay on the Causes of the Epidemics in Ireland. This article ought to be read by every member of our legislature.

Conclusions.

1. Diminished impulse at the chest—increased first sound—will denote simple dilatation of the ventricles.

2. The signs of No. 1, with a feeble pulse:—Extenuation, ramollissement, feebleness of the ventricle; if with a sharp first sound, adhesion of the pericardium.

3. Lengthened heaving of the chest, dull first sound and impulse, firm pulse:—Simple hypertrophy of the ventricle. If the sounds are inaudible, the affection exists in a higher degree.

4. If the sounds and impulse are strongly marked, though less sharp than natural, large pulse?—Dilatation, with hypertrophy.

5. Constantly strong impulse—sharp first sound, feeble second sound and pulse! Hypertrophy of auricle—adhesion of pericardium.

6. Prolonged bruissement, ending in a feeble, irregular impulse, and dull first sound; pulse feeble, regular, with second sound scarcely audible:—Disease; narrowing of the aurico-ventricular passages—dilatation of the ventricles.

7. Prolonged bruissement, ending in the usual impulse and first sound; pulse irregular:—Functional disease of aortic valves; ossification; contraction of aortic orifice?

8. Pulsating tumor of the aorta,—diastole of tumor coincident with impulse at the chest:—Dilatation; aneurism.

9. Bruissement of the aorta—coincident with the impulse at the chest—

brouissement prolonged to the second sound?—Rigidity; ossification; dilatation. -

Practical Remarks.

With the indulgence of the reader I will make a few practical remarks on some affections of the heart of inordinate action. These remarks have been the results rather of experience than system; but on considering them attentively I am pleased to discover, that they in every instance support the doctrines we have been advocating. They on the other hand throw so much light on the practice, that the latter, which was before conjectural and uncertain, or at best empirical, is now rational, and may be founded on pretty certain data. Thanks to Dr. Corrigan! the practitioner, instead of groping in the dark, or else abandoning all treatment in these affections, may henceforth practice in them with some degree of confidence. The reader will find, by comparing the conclusions with the practice, that the inordinate actions of the heart may, in general, be divided into *active* and *passive*—the former arising from hypertrophy or morbid irritability of the heart, or else from plethora: the latter, in which the heart is relatively passive, owes its origin to increased vis a tergo, with diminished power of the heart, or else to exhaustion or general irritability. Other affections depending on functional disorder of the valves, &c. I do not notice. The experienced practitioner, perhaps, will learn little from the following observations, but I trust they will be useful to some of my readers:—

1st. Palpitation—*thumping* at the chest—*pulse not strong*, with irritable constitution:—Scrofula, head affections, general bad health. *Treatment.*—Lime-water in considerable quantity long continued. The direct sedative effect of lime-water on the general and pulmonary circulations, I have proved in my inaugural essay, published in the year 1822. This remedy may act as a tonic in this affection. Digitalis I have found injurious. Constitutional remedies.

2d. Palpitation—*heaving* of the chest—*firm pulse*—florid complexion—subdued sounds, at least in proportion to the violence of the actions. *Treatment.*—Digitalis has succeeded, at least as a palliative, when lime-water had totally failed, &c.

3d. Palpitation—increased impulse or propulsion—flushed or florid face—throbbing;—symptoms constant, but increased by exercise or stimulants. *Treatment.*—Rest, abstinence, digitalis, bleeding?

4th. Palpitation—excited by exercise—sounds, impulse and pulse, although exalted, yet in due proportion to each other, with rather infirm health—pale face. I have found nourishing diet, wine, fresh air, and pleasant employment, of the greatest use.

5th. Palpitation—not habitual—from some temporary source of irritation, with *great thumping* at the chest, and *weak pulse*. *Treatment.*—Stimulants, brandy, &c. It is astonishing to see the palpitation almost suddenly removed and the pulse improved in this affection, by a small quantity of brandy.

6th. Palpitation—hurried breathing, with tendency to syncope—throbbing of the carotids and principal arteries—pulse jerking, irregular—increased sensibility to sounds and light—throbbing pain of the head—restlessness—jactitation—convulsion—delirium—sinking; occasioned by excessive evacuations, bleeding, hæmorrhagy. *Treatment.*—Stimulants, brandy, &c. Consult Dr. Marshall Hall's excellent work on the Morbid and Curative Effects of Loss of Blood.

There is a state analogous to the extreme stage of this affection, occasioned by very severe accidents, whereby the vital powers sink, sometimes irrevocably. My friend Mr. Samuel Berry, of Birmingham, who has had extensive opportunities of observing these cases, and what is better, has made good use of them, will, I trust, in due time publish the results of his labours.

7th. Palpitation, with tendency to hysteria or syncope—pulse natural—lassitude—wandering pains—sometimes pain of side or sternum—pain or cramp of left arm: paroxysms recurring while walking, riding in a carriage, or from mental emotion. This affection is, I think, described by Sydenham, under the name of scorbutic rheumatism; it simulates, and when its type is perfect, it constitutes, the disease more completely described by Heberden under the name of dolor (angina) pectoris, (sternalgia of Mason Good.) I have treated it successfully by the remedies most useful in rheumatism and scurvy, particularly the fresh arum conjoined

with armoraceous roots, &c. Sydenham gives a formula, the arum being the principal ingredient, and which he highly recommends in this affection, saying "nisi privato commodo, pubicem prætulisse, prorsus reticenda."

8th. Palpitation—sounds rather subdued—oppressed breathing, requiring the upright posture—pulse strong, frequent, irregular—symptoms of water in the chest or sack of the heart—œdema of legs—confined bowels—sometimes spasm or undue action of the supinator, or pronator muscles of the arms, or of the flexors of the metacarpal bones of the thumbs, chiefly noticed in shaking hands. The disease generally preceded by a long course of intemperance.

Treatment.—Wine, brandy, &c. to be strictly prohibited; substitute opium in considerable doses, which should be combined with a purgative. Diuretics, cathartics, digitalis. Under the use of this last remedy, I have seen the pulse reduced, not gradually, but *e. g.* from 126 to 84, and then to 42; the two last numbers would alternate from slight excitement. On recovery the pulse about 84. An excellent remedy in this affection is the scruple dose of calomel; it gives effect to the other remedies. It should be repeated once or twice after intervals of one or two weeks. I have used it with good effect in cases resembling No. I., especially when head symptoms were prominent.

9th. Palpitation, or throbbing of the heart; pulse soft, feeble; pain under the left mamma, or under the right ribs, or in the course of the ascending or descending colon or bladder, increased by pressure or deep inspiration simulating inflammation; flatulence; spasms of the stomach; globus and other hysterical symptoms; cramps; general irritability; tenderness of the os uteri; leucorrhœa; irregular (painful) menstruation.—*Treatment.* Local, by injections per vaginam (lotio. nit. argent. or alumen. et zinci); general stimulants, ammonia camphor; laxatives, anodynes, &c. The above recited symptoms I have chiefly borrowed from Dr. Addison's useful little work on uterine irritation. It happens, however, that I have at this moment two well-marked cases of long standing under treatment.

10th. Palpitation; fluttering of the heart, probably arising from irregular action; dischronous action of the auri-

cles, as observed in experiment 6; pulse feeble, ringing in the ears, dyspepsia, hypochondriasis sometimes in a high degree; irritation of the urethral passage, shewn by a redness round its orifice, sometimes pain in the neck of the bladder; on examination a stricture is usually found. There is a striking analogy between this affection and No. 9—the urethra in the latter corresponding in its sympathies with the uterus in the former. The treatment is also analogous, namely, local. I have repeatedly seen the peculiarly anxious appearance of the countenance will disappear within twenty-four hours after the introduction of a bougie. A perseverance in the use of this instrument, with alterative and purgative medicines, will completely remove the symptoms.

I might easily enlarge this list, but I should do so with less confidence than that with which I present the foregoing remarks. Enough, however, has been stated to shew the light which has been thrown on the morbid affections of the heart by Dr. Corrigan. The clew has been given, and every attentive observer will be able to explore for himself, as I believe, the most intricate forms of disease to which the heart is liable.

A CASE OF POISONING BY A SOLUTION OF MERCURY IN NITRIC ACID.

To the Editor of the London Medical Gazette.

SIR,

I RESPECTFULLY beg you to record in your valuable publication, the following case of poisoning by a solution of mercury in nitric acid.

I am, sir,

Your obedient servant,

JOHN J. BIGSLEY, M.D.

Newark-upon-Trent,
Nov. 23, 1830.

About a quarter past nine o'clock in the night of Nov. 10, 1830, S. H., an apprentice to a respectable butcher of this place, took a small portion of an escharotic liquid, used for the cure of the "foot-halt" in sheep, with the intent of destroying himself. The motive for making this attempt upon his life remains unknown, notwithstanding much inquiry.

He was a well-made lad, sixteen years of age; quite contented with his situation; but odd in his temper sometimes, and fond of ale. A little before taking the poison he had drank a quart of ale, besides a previous quantity in the morning of the same day. In fact, it appeared in evidence before the coroner, that he was rather intoxicated at eight in the evening.

S. H. knew perfectly the deadly nature of the liquid he was about to swallow, having been repeatedly informed of it. It was prepared by the druggist who furnished him with it, by dissolving seven parts of quicksilver in eight parts of nitric acid. A colourless liquid is thus formed, which is tinged pale green by the addition of a little verdigris. The acid remains in excess.

It was estimated with some correctness, that the lad did not take more than a tea spoonful. He acknowledged the act readily.

The first intimation of what had happened was his coming into his master's yard, and saying to the maid-servant, while he hung down his head, "I am very ill, and do not know what to do with myself." After some vomiting, he went into the kitchen, and rolled about on the floor in great agony, calling out for a knife to cut his throat with.

My friend, Mr. Lacy, being soon afterwards sent for, he found the lad in great pain about his mouth and throat, and retching violently, but only getting rid of a little thick phlegm. His face was pale, and expressive of great distress. He was in constant motion. The extremities were cold, and the pulse was labouring, and sometimes rather indistinct. Diarrhœa soon afterwards came on, of an ordinary loose feculent nature.

The stomach was immediately well washed out with Reid's apparatus, without causing sensible inconvenience in the throat; and large quantities of chalk were administered, but with no mitigation or change of symptoms.

A little after ten o'clock I saw the patient, and found him with his clothes on, hanging quietly over the kitchen-fire. His face was bloated and pale; his eyes heavy, but wild; and his lips purple, and covered with white froth. He was cold, and especially in his hands and feet; there was great debility; the pulse was small, regular, and 120 in number. On being questioned, he com-

plained of a burning pain, from the mouth downwards, along the gullet, to the epigastrium and whole abdomen, which was tender, and of the ordinary size. The epigastrium was tense, and rather sore to the touch; he could articulate tolerably, but with pain. He was now put to bed; little further treatment was attempted, as death was fast approaching.

With the occasional discharge of loose stools, and painful fits of vomiting, he gradually sank under the extensive inflammation that had established itself, and died at a quarter before twelve the same night, his faculties having continued sound to the last.

The *inspectio cadaveris*, twelve hours after death, was skilfully performed in my presence by Mr. Gosling, the visiting assistant of Mr. Lacy.

The body was still rather warm; there was no unusual appearance externally; the abdomen was hard and flat; the face (and especially the lower parts) was bloated, and of a bluish colour; the lips were closed, livid, and covered with viscid froth.

A longitudinal incision having been made through the integuments from the chin to the pubis, the cavities of the thorax and abdomen were completely exposed. The tongue, os hyoides, a portion of the pharynx adjacent, and the upper parts of the larynx, were next removed in one mass; and then, in a similar manner, were taken out, dissecting downwards, the remaining portion of the pharynx, and the œsophagus, as low as the diaphragm, having attached to them the rest of the larynx, the trachæ, and some of the first branches of the bronchiæ.

Considerable quantities of chalk having been administered during life, the whole alimentary canal contained variable quantities of that substance, in the state of powder; the palate, and back parts of the tongue, were accordingly whitened with it, the latter being somewhat livid, very hard, and roughened at its root by knotty eminences, one of which was quite a blister. The cellular membrane on the back of the epiglottis was raised into a blister also, which extended a little way into the neighbouring parts. The larynx and trachea internally were slightly injected—not so the bronchial tubes.

The mucous membrane of the pharynx was every where of a deep rose

red, and in numerous small blotches, of a purple colour, with here and there sienna brown crusts, of the size of a horse bean, irregular in shape, rough, and hard. Appearances found in the stomach proved these to be imperfect eschars. These marks of inflammation gradually disappeared downwards, and left the middle of the œsophagus perfectly sound for three inches; but recommencing in the same slow manner, the red and purple injection became intense towards, and at the cardia.

The peritoneal coat of the stomach displayed no morbid appearance. On cutting open this viscus, it was found thickened, and particularly at the small end, two inches from the pylorus; it was nearly empty; there were a few ounces of water, a little brown grumous matter, some green bile, and a partial and thin coating of chalk. The mucous coat was deep rose-red universally, except in patches, several inches square, about the cardia, and on the great curvature, of a dark livid hue, in which brown eschars abounded, usually oval, and an inch or more in length. Some of them were the same as those noticed in the pharynx, but others were softened into a brown pulp, or looked like macerated membrane: when these were rubbed off, the surface underneath was left smooth, and bright red. Smaller eschars were found in other parts of the stomach, and commonly on the summits of the rugæ. The pylorus, and its vicinity, were very much discoloured, red and purple. Nothing like a perforation was observed, and no abrasion except on removal of the eschars.

Large quantities of chalk were met with in the duodenum, together with a little bile. This bowel was the seat of the same inflammation as that of the stomach, but not quite so intense, and the eschars were smaller and fewer. The small intestines were of their usual volume, and softened in their texture: they were, externally, of a dull red hue, from the injection, as I judged, of their muscular and mucous coats, which were every where accordingly, at least in the four extensive openings we made, of an uniform dull red suffusion, with occasional traces of enlarged vessels. A living lumbricus was found in the ilium. Together with the redness, the lividity returned, strongly marked at the caput cœcum coli, and continued in diminishing energy on the mucous coat, through-

out the whole colon; it disappeared at the commencement of the rectum. The colon descendens was distended with flatus; the pancreas, spleen, kidneys, and liver were healthy; the gall bladder large, and full of yellow bile. The bladder was not examined. The lungs were sound, but did not crepitate quite so freely as usual. On the convex surface of the left lung, and about the middle, the pleura had given way, and permitted the formation of a vesicle of the size of a nut. Nothing morbid was seen in the pericardium or heart; of the cavities of the latter, the right ventricle only contained blood. Peculiar circumstances of time and place did not permit us to open the cranium.

I shall take leave to add, that I am not aware that a case of this kind of poisoning is on record: it is not adverted to by Plenck, Orfila, Christison, or Beck; neither have I been able to meet with a case in the periodical works to which I have access, although several instances of death from the internal exhibition of red precipitate occur. Professor Brande, indeed, in the second volume of the *London Medical Repository*, states very shortly, and generally, that a patient was brought to death's door (to use his own words) by taking nitric acid in drops at the same time with blue pill.

It will be observed that the symptoms during life, and the appearances after death, differ essentially from those of nitric acid, or of the other preparations of mercury. The rapid extension of the inflammation from the mouth to the rectum, and its universal diffusion over the inner coats of these canals, are both remarkable, and the more so when we remember the small quantity of the poison taken. Coagulable lymph was not met with, nor could be expected, from the rapid manner in which life was destroyed.

ON LITHOPLATOMY.

By M. S. BUCHANAN, M.D. &c.*

One of the Surgeons to the Royal Infirmary.

CASE I.—Mrs. Grant, aged 50, of full habit of body and lax fibre. Has been subject for many years to calculous com-

* Abbreviated from the *Glasgow Med. Journal*.

plaints, but, till lately, would never submit to examination. On the 29th July last, was admitted under my care into the Ropal Infirmary, and calculi of various sizes with ease detected lying at the neck of the bladder. In addition to the usual symptoms attendant on this painful disease, she had the most complete incontinence of urine I ever saw, the bladder having become much contracted, its coats thickened and constantly discharging white ropy mucus from its internal surface. Extensive excoriation of lymphæ, labia, nates, and thighs, was the consequence, and considerable paralysis of inferior extremities had of late rendered her a most pitiable object. Immediately on admission, I ordered her bowels to be well opened, anodyne injections to be administered, and the warm bath to be used; and on the 3d day of August, with consent of consultation, I dilated the urethra with Weiss' instrument, and extracted, with the aid of a small pair of forceps, three stones, two of them about the size of filberts, and the third about the size of a walnut. She experienced little pain during the process of dilatation, which occupied about seven minutes. The incontinence of urine, and consequent excoriation of nates, &c. in a short time disappeared; and when she left the house, about three weeks after the operation, she could walk from one end of the ward to the other without assistance, her general health having at the same time greatly improved.

CASE II.—Robert Brock, a gentleman's servant, was admitted under my care into the Infirmary, on the 11th August last. At that time a stone could be felt in the urethra, a little anterior to the bulb. It had advanced thus far about a fortnight previous to admission, and from its position now caused excruciating pain. He stated, that from his infancy he had laboured under symptoms unequivocally indicating stone in the bladder, but till lately would not consent to be sounded. This operation was repeated with great care by several surgeons in this city, some months previous to admission, without any stone having been detected, and various means were also adopted the fortnight prior to the 11th instant, to get the stone dislodged from its situation in the urethra, by the introduction of catheters and bougies of the largest

size, to the spot where it seemed sacculated; and also by the trial of various kinds of urethral forceps, assisted by the warm bath, &c. but all to no purpose. The gentlemen who met in consultation on his admission, were so convinced that no further trials of the above kind would succeed, that he was immediately placed on the operating-table, secured as for lithotomy, a grooved staff introduced as far as the stone, and with one stroke of the knife the urethra was incised to the proper extent, and the stone extracted. The operation was the affair of a moment, and was so free of pain that the patient seemed astonished at having handed to him the cause of all his misery. The stone measured two inches and eight lines in its largest circumference, and one inch and ten lines in its smallest; it was convex on its one side, and flat on the opposite, with a small nodule in the centre of this last, indicating that it was the smaller segment merely of a larger stone, which must still be in the bladder. This was made more evident, not only from the very sharp edge of the flat surface above described, (which had very much the appearance of having been recently broken), but also from the concentric layers of lithic acid, which were observed when sawn through its largest diameter by the lathe. On the 14th the wound in the perineum was completely healed, and no symptoms of calculus remained. He has been frequently sounded since without any stone having been discovered, and, in consequence of feeling in every respect well, he was dismissed cured.

Query 1st. Is there any instance on record in which a stone of such dimensions was passed thus far into the urethra from the bladder?

2d. In what manner shall we account for the section or fracture of this stone in the bladder, no instrument having at any time detected it till its exit from this viscus?

3d. Why is the alleged remaining half unable to be discovered by the most careful sounding, as the first was, previously to its escape from the urethra?

But if, notwithstanding all that has been advanced, it is denied that the male urethra is capable of dilatation in the manner suggested, another method remains to be discussed, of more importance by far than any to which I

have hitherto adverted, and to which I am inclined more particularly to apply the term lithoplatomy.

The operation I allude to is that by which the male urethra is converted into a female one, and thus the difficulty and danger of both lithotomy and lithotripsy is at one step superseded by lithoplatomy.

For the purpose of effecting the first part of this operation, the patient must be secured as for lithotomy; a grooved staff is introduced into the bladder; the membranous part of the urethra near the prostate incised, to the necessary extent, to admit the lithoplatome; and then, having withdrawn the staff, the operation of dilatation of the remaining part of the urethra, prostate, and neck of the bladder, will be, with nearly the same ease, safety, and effect, accomplished, by means of my lithoplatome, as in the female.

That there are many objections to the above method of operating for stone, I must at once admit, and until I can give it a fair trial on the living subject, I shall not contrast it either with lithotomy or lithotripsy; judging, however, from what I have already experienced in the female urethra, and, on the dead subject, in the male, I am not the least afraid of the result. I shall only add further, that if the operation of lithoplatomy does come up to my expectations, and that of many judicious and talented surgeons here, to whom I have mentioned it, how much will suffering humanity be relieved, and the labours of the surgeon facilitated.

But lest it should be said that the operation of lithoplatomy which I have above described, and so strongly recommended, is nothing more than the apparatus major, the Marian method, that of Le Cat, Le Dran, or Pajola, let any one take a glance at these methods of operating, and the difference must at once strike him. It would extend this communication too much to enter at large on this interesting subject, which, at some future opportunity, I intend to resume; but I must be allowed to say, that, in investigating the writings of a vast number of lithotomists, both ancient and modern, I can find nothing which, in the smallest degree, approaches to the operation I have above described. It is the principle, I once more repeat, of *slow and continued dilata-*

tion, by the *instrument* which I have recommended, applied to the *whole*, or a *small part*, of the *male urethra*, for the extraction of calculi, which alone constitutes my improvement of this part of surgery.

In stricture of the urethra, could a very slender lithoplatome, introduced through the constriction, not be made to overcome this more safely and speedily than either the simple or armed bougie, or conical sound? If the instrument cannot be passed through the spasmodic, or organic contraction of this canal, could it not, by its introduction as far as the stricture, and kept steadily in its place, be made, by gentle dilatation, to overcome this disease? or at least allow of armed bougies, or sounds, being more safely made to act in accomplishing their object?

ANALYSES & NOTICES OF BOOKS.

“ L'Auteur se tue à allonger ce que le lecteur se tue à abrégé. ”—D'ALEMBERT.

A case of Chronic Cynanche Laryngea, in which the operation of Tracheotomy was performed. By W. H. PORTER.

Cases of Foreign Bodies in the Trachea. By RAWDON M'NAMARA, M.R.I.A. Member and Professor of Materia Medica in the Royal College of Surgeons in Ireland, one of the Surgeons of the Meath Hospital.

Observations on a peculiar Convulsive Disease affecting Young Children, which may be termed Spasm of the Glottis. By H. MARSH, M.D. M.R.I.A. Professor of the Principles and Practice of Medicine, &c.

WE select as the subject of the following analysis, three articles from the Dublin Hospital Reports, which have this circumstance in common, that they severally relate to the upper portion of the air passages: they present, when taken collectively, a considerable mass of information, and their union, if not very intimate, at least cannot be regarded as unnatural.

Cynanche Laryngea.

Cases of cynanche laryngea, of a chronic character, in which an artificial opening into the air passages has been made, are to be found scattered through various works and journals; certainly the impression which they have made on the profession has not been of a nature favourable to the operation. Sometimes, however, relief to a greater or less extent has been afforded, and the subject of the present notice is a case in point, possessing some features of interest.

A stout and muscular labourer, aged 24, was attacked with cynanche laryngea, and, notwithstanding active measures, was soon reduced to a state of unutterable distress: the precise symptoms are not detailed, but the operation is stated to have been imperatively required.

"Having placed the patient with his neck toward the light, and caused his head to be thrown backward as far as possible, I made an incision along the central line of the neck, commencing below near the sternum, and terminating above at the cricoid cartilage. Owing to the shortness and thickness of the neck, this incision was not of sufficient length to afford room for the further steps of the operation, a circumstance that added to its difficulty afterwards. The muscles in front of the trachea were then divided, and in the depth of the incision a vein was opened. The wound was now more than an inch deep, and from its bottom the blood bubbled up, largely mixed with air; and on applying my fingers to the neck immediately above the clavicles, the crackling sensation produced by emphysema was very evident. Having paused a few moments, in order to command the hæmorrhage, I proceeded with the operation, and laid bare the trachea at a depth of more than an inch and a half from the surface; and having in some degree fixed it by applying the nail of the forefinger of my left hand against the cricoid cartilage, I made a semilunar incision into it, through which a tube, formed of a portion of a gum-elastic catheter, was passed.

"In this case the patient did not immediately experience the relief generally afforded by the operation; the irritation occasioned by the presence of the tube seemed to distress him greatly; he rolled himself about in the bed, looked wildly, and gnashed his teeth. The

blood trickling into the trachea occasioned terrific paroxysms of coughing, in which his face became swollen and purple, and he appeared on the verge of suffocation. The tube was forcibly expelled seven or eight times; and this scene of distress continued nearly half an hour, after which he experienced some relief, became calm, and enjoyed a little sleep."

Symptoms of bronchitis, which had commenced before the operation, continued for several days with great severity, and the relief he experienced was very limited in degree. He was brought under the full action of mercury without relief, and continued from the 28th of November, when the tracheotomy was had recourse to, up to December 15, without much alteration, except the diminution of the bronchitis; on this day, however, a new and alarming symptom presented itself, for on attempting to drink, the fluid escaped through the wound, indicating that a communication had taken place between the œsophagus and trachea. Paroxysms of difficult breathing continued to come on occasionally, and hectic set in. Dec. 22, another remarkable change took place, the pulse falling to 48,—one of the arytenoid cartilages, in a state of earthy degeneration, had been spit up the day before. The quantity of his drink which passed by the wound now began to diminish; a large tube, 3/8ths of an inch in diameter, was introduced into the external wound, with a view to its permanently remaining; and the patient continued in all respects to improve. On the 13th of January he left the hospital, still having the tube, through which respiration was carried on without interruption or inconvenience. On the 31st of May he visited the hospital, much improved in appearance, but still breathing through the tube, which Mr. Porter is of opinion he will do for the rest of his life.

It is so rare to find the progress of phthisis laryngea arrested, that the case deserves serious consideration.

Foreign Bodies in the Trachea.

This paper relates to a class of cases in which the operation of tracheotomy is required for the purpose of fulfilling a much less doubtful indication than that above noticed. There are few cases, indeed, in which the transition from

imminent danger to comparative safety is more conspicuous than where a foreign body, which has been accidentally received into the trachea, is removed by a surgical operation. This event most frequently takes place in children, and a plumb-stone, or some such body, is for the most part what slips into the windpipe in some imperfect act of deglutition, during which a sudden inspiration is made.

S. Lovett, four years of age, was brought to Meath Hospital October 13, 1827, in consequence of his father suspecting that he had swallowed a plumb-stone two days before. The account given by the father was—

“That at three o'clock on Thursday he had been speaking to him whilst eating a damson tart; that the boy had been talking upon a subject that interested him a good deal, with his head raised, and his breath hurried, when he was instantly seized with a fit of suffocation, attended by violent coughing and expectoration of “red, frothy blood,” upon which the father took him to Dr. Duré, the regimental surgeon; but before he arrived at the doctor's quarters the child recovered his breath, and considerably mended; the bloody discharge ceased after a little, as did the cough, when he played about as usual, and seemed perfectly well, with the exception of his being attacked at intervals of an hour, or an hour and a half, with fits of coughing, and of his being very hoarse.”

The description given by Mr. McNamara of the symptoms is impressive and satisfactory:

“Being persuaded that a foreign body had entered the trachea, I determined to watch the child attentively, and I soon found that though his manner was lively and playful, his father's account was correct, inasmuch as he was seized at intervals with fits of suffocative cough, so peculiar, that if once observed, I do not think they could be mistaken. During a paroxysm his countenance became purple, his cheeks were forced out, his chest was raised, and his neck swollen, in consequence of his efforts at expiration; in short, he was in the condition of a person who could fill the lungs with air without having the power of expelling it; and therefore the cough, in this case, differed from any spasmodic cough I had before witnessed, for he had the power of filling

the thorax to the utmost, but the difficulty he experienced was in expiration; nor was this difficulty the result of the contraction of the muscles of the larynx, for, whenever a paroxysm was severe, I could distinctly perceive that there was a mechanical obstruction to the exit of the air, produced by the ascent of the foreign body to the larynx, causing a perfectly audible sound, which resembled more that produced by striking the tongue forcibly against the anterior part of the hard palate, when the mouth is closed; in addition to this I may remark, that in no instance was the subsidence of the paroxysm marked by that deep and sonorous inspiration so characteristic of whooping cough, or of spasmodic cough.”

The operation was proposed to the child's father, by whom, however, it was declined. The little patient passed a very restless night, and next day was worse; and in the paroxysms of coughing, the foreign body could be heard impinging against the glottis, which it then stopt up like a valve. The operation was performed in the usual way: as soon as an opening was made, a fit of coughing forcibly expelled a large plumb-stone, which was projected to the height of two or three feet. He did well, and in ten days was discharged cured, the wound being healed.

The following case is interesting and instructive:—

“Dennis Toole, an intelligent boy, of a robust habit, was brought to the Meath Hospital on Saturday the 5th of September, 1829, in consequence of his having swallowed, on the Wednesday before, a plumb-stone, which he had been whistling through, having made a hole in either side of it, and removed the kernel, in order to make it resemble a bird-call. The boy suffered but little inconvenience, except at intervals, when he was a good deal distressed by fits of suffocative cough; he was able to run about and to occupy himself as boys of his age usually do; he did not complain of pain on deglutition; he said that the cough caused pain in his throat, but only during severe paroxysms, and that he had a dull pain at the ensiform cartilage; his countenance was bloated; his pulse 106; his skin cool; his fits of coughing, which were becoming evidently more frequent, had not a croupy character, but resembled rather those of

emphysema of the lung, or suffocative catarrh, and were followed by white frothy mucous expectoration. The chest sounded clear when percussed; respiration was natural, excepting a slight sonorous rale in the upper part of the left lung; the pharynx exhibited traces of increased vascularity. The boy was able to make a whistling noise, audible at a considerable distance, whenever desired to do so; this he effected by forcibly expelling the air through the stone, but he never could make it during inspiration. From a review of this case I felt persuaded that the stone was most probably fixed in the upper part of the trachea, where it might have rested with an extremity in either ventricle of the larynx; at all events it appeared clear, that during the efforts of the boy to whistle through it, the apertures of the stone must have corresponded with the rima glottidis. I therefore determined upon performing the operation of laryngotomy, in the expectation that I should be able to remove the foreign body, either from the wound, or that I could force it back through the rima by means of an instrument passed for the purpose. I accordingly performed the operation in the usual way, making an incision into the larynx and trachea of about one inch in length, the centre of which was the crico-thyroidal space. A sufficient time having elapsed, and the stone not making its appearance at the wound, I passed a full sized flexible catheter through the trachea, in order to dislodge it and press it into the pharynx; this to all appearance was effected, for the boy could no longer whistle through it, a power he possessed very audibly on being placed on the table, and which he was now incapable of accomplishing, though the wound in the trachea was closed for the purpose; and to this the suffocative cough entirely disappeared, and he strenuously asserted that he swallowed the stone. The bleeding having ceased, he was put to bed. On visiting him shortly afterwards, I found him perfectly tranquil, completely relieved from his cough, his pulse 90, and his respiration natural; the only anxiety he seemed to experience arose from the loss of his voice, which he was apprehensive would never be returned. Nothing remarkable occurred in this case for eight days. The day after the operation some aperient medicine was admin-

istered, and though the stools were narrowly watched, the stone was not found. Saturday, the 13th September, upon examining the chest with the stethoscope, I was astonished to find a nullity of respiration on the right side, whilst the respiratory murmur on the left was more audible than natural, at the same time that the right sounded clear on percussion. From these circumstances I had no hesitation in declaring that the stone was lodged in the right bronchus, a situation which happily it did not occupy long, for in a few minutes, on applying the instrument to the trachea, I could perceive that peculiar "ronflement," before described, which is so indicative of a foreign body moving in that tube. In addition to this he was now able to whistle, though faintly, through the stone; and it was curious to observe how the whistling noise and the nullity of respiration alternated; for whenever the stone was impacted in the right bronchus he was incapable of making the noise, and when he was able to whistle through the stone the respiratory murmur of the right lung was natural. I now determined to dilate the wound downwards; and on Saturday, the 16th of September, I passed a probe-pointed bistoury into the trachea, dilating the wound to the extent of about half an inch, when the stone was forced out in a fit of coughing. He was now put to bed, the sides of the wound were gently approximated by adhesive straps, and he was ordered two grains of calomel at bed hour; this procured three evacuations from his bowels, and was the only medicine he required, inasmuch as he was dismissed the hospital perfectly well in six days from the removal of the stone, without having had a single symptom worth recording during that time."

In cases similar to the above, the diagnosis is the part of most importance, and this is to be derived from the history of the patient—namely, whether he has or has not laboured under any spasmodic affection of breathing, such as hooping cough. The absence of fever, at least at the onset of the attack, and the intermissions, will serve to make the affection readily distinguishable from inflammation. From spasmodic croup it may be distinguished, in that the difficulty of breathing which attends that disease occurs during *inspiration*, not expiration. From hooping

cough, the previous exposure to cold, and the pre-existence of catarrh symptoms, will distinguish it—the character of the “hoop,” which is produced by *inspiration*, and bears no resemblance to the suffocative cough caused by a foreign body. On the other hand, there is the sound of the stone moving along the windpipe, and the absence of the respiratory murmur in one lung—its return after a fit of coughing, and its reappearance without any apparent cause. The advantages of an early operation, and the risk of inflammation from its delay, are too obvious to require illustration.

Spasmodic Affection of the Glottis.

The affection which forms the subject of this paper, was mentioned by Dr. Clarke in his Commentaries on the Diseases of Children; and more recently by Mr. North, in his work on Convulsions—a volume to which it is remarkable that Dr. Marsh does not allude; indeed he asserts that he does not find the disease described in any systematic work in the English or French languages.

The morbid affection in question appears to consist primarily in spasm of the muscles of the glottis; a condition, however, in which, as it increases in severity, other muscles come to participate, till general convulsions may at length be induced, especially if the case be neglected or mismanaged. Sometimes the spasmodic affection is the only symptom which can be perceived, no source of irritation being discoverable; but in other instances it is connected with difficult dentition, or derangement of the digestive organs, or other disturbance. The following cases will serve to illustrate these positions:—

“A child, eleven months old, remarkably healthy, and in appearance well thriven, had been for some time affected in the following manner:—It had been observed, now and again, to awake suddenly from sleep in a state of alarm and agitation, to struggle for breath, and, after repeated efforts, to recover from the paroxysm, with a long and sonorous inspiration; the convulsive effort was described to be severe, and the face to become swollen and purplish: these attacks occurred at first only on awaking from sleep, afterwards more frequently; sometimes without any perceptible cause, at other times,

and more frequently, when she was vexed or was about to cry. On examining the child accurately, I could discover no deviation from a state of perfect health; the pulse and respiration were natural, skin cool and soft, tongue clean, the breath pure, the appetite good, the bowels regular; the alvine excretions exhibited the appearances usual in healthy children on the breast. She was playful and lively, but was startled unusually by any sudden noise; the four incisor teeth had appeared; the gums were neither swollen nor tender.

“The treatment consisted in half grain doses of sulphate of quinine every sixth hour, and free exposure to the open air; the attacks became less frequent, and after some days ceased altogether. She has since (during a period of two years) remained in very good health.

“Two other cases have fallen under my observation, in which the disease was confined to an occasional spasmodic affection of the glottis; no other perceptible derangement of function co-existing with this, nor any apparent irritation from dentition; in these, as in that already stated, the disease subsided under the influence of a mildly tonic treatment.

“A patient whom I had been attending, happened to mention to me incidentally that her child, about fourteen months old, was in the habit of awaking suddenly from sleep as if alarmed, breathed with difficulty, and made a loud noise like that in a fit of the whooping-cough; she said also, that this occurred occasionally during the day, when the child was cross; she spoke of this lightly, as of an unimportant thing. I requested to see the child: it looked pale and unhealthy; the integuments were soft and flabby; the tongue coated; the bowels relaxed or confined; the stools green and curdy; the child was irritable and nervous, and seemed to suffer from dentition; the extremities were slightly swollen, and the thumbs placed firmly across the palms of the hands. I stated that I thought the child very ill, and that probably convulsions would take place.

“Next day I was summoned in haste, and found the child just recovered from a severe paroxysm of general convulsions.

“The gums over the projecting

teeth were divided; leeches were applied to the temples, cold lotions to the head, and warm fomentations to the extremities; aperient medicines were given; the nurse, whose milk obviously disagreed with the child, was changed; and it was removed from the city to a healthy situation in the country. After one other attack of convulsions, recovery was speedy and complete.

"In this case the disease was complicated with derangement of the digestive functions, and also with painful dentition; the convulsive paroxysms, at first partial, increased in severity, and at length became general. The remedies which appeared to be ultimately and permanently efficacious were, change of air and change of nurse.

"A fine child, twelve months old, remarkably large for its age, had been subject, for four months, to frequent attacks of what the parents called croupy breathing; those attacks, they said, occurred at first only at night and rarely, afterwards occasionally during the day. For some time the child appeared so well that those attacks were disregarded; at length, having increased in frequency and severity, medical advice was obtained. The treatment, which consisted in bleeding, emetics, mercurial purgatives, confinement to a heated apartment, and warm flannels next the skin, was founded on the supposition that pulmonary inflammation existed.

"When I first saw the child, the struggle in breathing was difficult and protracted, and the face, during the paroxysm, became quite livid. These attacks, which usually terminated with a loud and sonorous inspiration, were excited by very slight causes, such as sudden noises, the removal of the child from the nurse's arms, or any source of irritation or annoyance; and now, instead of going off as formerly, they were, once or twice in the twenty-four hours, terminated by severe and general convulsions, which had all the characters and appearance of an epileptic paroxysm: after one of those strabismus remained*; there was also a swollen and puffy state of the extremities, with a spastic rigidity of the fingers and toes; the digestive functions were greatly deranged, and the child looked ex-

ceedingly ill: it had been weaned for nearly three weeks. A healthy wet nurse was procured; the gums, rather as a measure of precaution than from necessity, were divided; the temperature of the apartment was lowered, and gradual habituation to the open air adopted; the quantity of clothing with which the child was oppressed, was by degrees diminished; and, after a little time, the body was sponged daily with vinegar and water; the child had already been so frequently and copiously bled, that further bleeding was not deemed advisable. Its health improved rapidly, and, restricted in nutriment to the nurse's milk, the bowels soon returned to their natural state; the general convulsions ceased altogether, and the attacks of spasmodic dyspnoea became daily less frequent and severe. As a proof of the completeness of recovery, it may be mentioned, that a few weeks having elapsed, this child was extensively scalded, and yet no convulsive or spasmodic symptom ensued. The child, moderately covered, almost lived in the open air, and during the whole process of dentition, a succession of fresh wet nurses was provided. He is now, after the lapse of some years, a fine and healthy boy. In this case, the change of nurse, and the substitution of the tonic for the heating regimen, were attended with results at once speedy and satisfactory."

The first of these cases exhibits the disease in a mild and simple form; in the second, it was complicated with derangement of the digestion; and in the third, the injurious effects of injudicious remedies are satisfactorily shewn. The chief peculiarity in the method of treatment adopted by Dr. Marsh consisted in the exhibition of mild tonics. In one case—that of a child two years of age, who was reduced to a miserable state of irritability and exhaustion, by difficult dentition—the convulsive symptoms were relieved by an injection of infusion of tobacco, containing grs. v. of the leaves in six ounces of water. In two instances the disease seemed to be caused, and in a third to be reproduced by the contaminated atmosphere of a newly-painted house.

Dr. Marsh concludes his observations on the treatment in the following words:—

"If we take a survey of the several cases of this disease which have been

* On the recovery of the child, this symptom gradually disappeared.

stated, we learn that it varies much in degree, and that its complications are numerous. In its mildest and least complicated form, the spasmodic action is confined to the muscles of the glottis, and the treatment consists in improving the general health, and in giving tone to the nervous system. The symptoms in such cases will rarely fail to yield to some of the vegetable or mineral tonics, pure and bracing air, and a well regulated diet: in some cases I have perceived, I think, advantage to arise from some of the antispasmodic medicines, and amongst these, none has appeared to me more beneficial than the old fashioned medicine, the *tinctura fuliginis*; but when the disease is complicated with painful dentition, derangement of the bowels, or any febrile movement in the system, the primary object of the treatment must be, to remove these accompanying ailments; until this be effected, the treatment applicable to the spasmodic affection, though it may mitigate its severity, will fail to eradicate the disease. When the spasmodic symptoms extend themselves, and implicate the muscles of the extremities, the disease assumes a more formidable aspect, and soon, if not checked in its progress, paroxysms of general convulsions will establish themselves: in this stage the membranes of the brain become so frequently engaged, that the utmost vigilance on the part of the practitioner is required to prevent the occurrence of such mischief; yet it must not be lost sight of that the disease, even in its mildest form, is attended with danger. One case is recorded of sudden death during the spasmodic closure of the glottis: this occurred in a child who was otherwise in perfect health, and I have heard of several instances of the same kind. In every stage of the disease, therefore, we should be aware of and guard against the liability to sudden death; all needless sources of irritation should be avoided, and the child closely watched, and carefully held and supported during the paroxysm of dyspnoea. In irritable and passionate children the danger is increased. Dr. Johnson has stated to me that he has seen a child in a state of asphyxia, caused by this disease, recovered from apparent death by the instantaneous application of artificial respiration."

A Practical Treatise on Diseases of the Eye. By WILLIAM MACKENZIE, Lecturer on the Eye in the University of Glasgow, and one of the Surgeons to the Glasgow Eye Infirmary.

THE name of Mr. Mackenzie is familiar to the readers of this Journal. Our early numbers contain several papers by this gentleman on the different forms of ophthalmia, which must have impressed them with a conviction of his being an observing practitioner and an accomplished scholar. It is this combination of individual experience with a thorough and discerning acquaintance with the medical literature of Germany, France, and Italy, which stamps the volume before us as one of no ordinary value. It is, indeed, a most elaborate and comprehensive work, including all the diseases and traumatic affections of the eye and its appendages. It contains an immense mass of information, rendered easily accessible by an excellent table of contents and a copious index, and moreover the whole is uncommonly well "got up." It ought to be in the library of every one desirous of making himself master of the many morbid conditions and complicated affections comprehended under the general appellation of "diseases of the eye."

MEDICAL GAZETTE.

Saturday, December 11, 1830.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

STATE OF MEDICAL SCIENCE IN ENGLAND.

IN our remarks on this subject the week before last, we stopped short, without completing our inquiry. We explained, in a general way, the nature of the delicate, though not absolutely declining, state of medicine amongst us, and we pointed out what we conceived to be the principal causes of its backward condition. The writer to whom we are indebted for giving an impulse, and an interest to this discussion, has summed up the causes of the decline of science in Eng-

land: it is owing, in the first instance, he says, to the ignorance and supineness of government; next, to the injudicious organization of our scientific boards and institutions; thirdly, to the indirect persecution of scientific and literary men, by their exclusion from all the honours of the state; and, lastly, to the unjust and oppressive tribute which the patent law exacts from inventors. How far the medical profession generally is affected by the first three of these causes we have already shewn; and we went further: we proved that much of the depression and discouragement under which the profession labours is owing to the peculiar education of the higher classes—the aristocracy—“the glass of fashion, and the mould of form” in their follies and prejudices, as well as in their more obvious external attractions. Now a very little reflection will enable us to follow up our remarks. The medical men of England, it may be observed, have always contrived to maintain a respectable character with their continental rivals, notwithstanding their admitted deficiency in the groundwork of science; nay, they have been prized for their practical excellence, and as practitioners have long supported a pre-eminent reputation. The names of Sydenham, Fothergill, Huxham, Heberden, Jenner, and Baillie, are as familiar in the mouths of foreigners as in our own, and perhaps held by them in superior esteem. But these, with many others, of whom we think it needless to remind the reader, must be considered as the redeeming few who, by their sterling native talent, have saved the national character. Were it not, indeed, for the native good sense, and the independent and practical turn of mind that belong generally to the people of this country, and we may say to our men of medical science in particular, our reputation as improvers, or even as practitioners of medicine, were little better than at zero. We have had

nothing else to back us but the unwrought ore of talent—slowly available to the accomplishment of any useful design.

It is but fair to ascribe merit to whom it is justly due; and it ought to be clearly understood, how far the profession in England are indebted for character to external circumstances, and how far to their own resources. They owe nothing most assuredly to the fostering protection of the legislature: not only has there been no place of honour or emolument reserved for their members by the State, but they seem to have been always recognised more for harm than good—for persecution rather than for protection: not only, in short, have they pursued their career without encouragement, but with the positive inconvenience of impediment and restriction. Thus they may be said to owe every thing to themselves, and nothing whatever to external circumstances.

No doubt there are such appointments as those in the lunacy commission—the vaccine establishment—and the county infirmaries—bestowed on members of the profession, in pursuance of certain legislative enactments; but let it not be misunderstood, these are posts filled by physicians, as such, with duties to be performed which physicians alone are adapted to perform, and in which, by their professional labour, they earn the pittance that is assigned them. They are *not* posts of that nature that medical men are appointed to them for the purpose, either expressed or understood, of aiding the progress of science; nor are they of that honorary description which would enable a man to devote even the major part of his time to the promotion of his art.

Among our continental neighbours, on the other hand, the value of medicine is far better appreciated. It is represented in the late report of the Minister of Instruction to the King of the French,

as "the noblest of the sciences, and the most useful of professions:" the document then goes on to regret "that the medical profession" (observe this is in France, where so much has been really done for medicine) "has been suffered to remain so destitute of resources to those who practice and who teach it. By the very nature of their studies," says M. Merilhou, "medical men seem in some degree excluded from the ordinary paths of ambition and fortune; they are on that account to be considered as entitled to more encouragement, and to a larger share of those honours which are usually bestowed on merit." The result of this candid and gratifying report we communicated in a former number.

When we refer thus frequently to the French school, and the French system of regulating the profession, we by no means wish to be understood as willing to adopt all the peculiarities of our continental brethren. As we expressly differ from them in the matter of the *Concours*, and the arrangement of the schools generally—preferring our own mode of election and our free-trade and emulative system to theirs—so we do not covet their more minute regulations. There are, however, some particulars connected with them which we think well worthy of consideration. We would that all the *spirit* of the French government towards the profession in that country were adopted by our government in this; and with that spirit we would desire but one or two things more: these are, their precautions in admitting properly educated candidates into the schools, their arrangements relating to the *clinique*, and their liberal encouragement of practical anatomy.

It is abundantly evident that the state of medical science in any country must depend in the first instance upon the character and abilities of those who cultivate it. The first reform, then, that will tend to the advancement of medical science, must be in the educa-

tion of those who profess to be its promoters—it must come, therefore, from themselves—it is in their own power. But however commendable in most respects may be our present system of education, nobody will pretend that it is complete; however much genius and good sense may have done for the eminent medical men of our nation, nobody will pretend that these two great qualities alone will do all that may be done, and that there will not be a thousand times a better chance of a valuable result if a complete system were planned and promoted.

In this the government might most materially assist; in the first place by removing the restriction or prohibition which impedes the study of anatomy, and then by the endowment of certain public professorships—professorships to be bestowed on men of undoubted eminence, whose object is known to be the promotion of science, and who should be relieved from the drudgery of lecturing. We entirely agree in opinion with the learned Reviewer in this respect, who contemplates with ability and expresses with eloquence what he conceives would have been the result of conferring the honorary appointments on men of name and eminence, and the actual business of the chairs on popular teachers.

We shall not at present enter into a detail of what we should think the most advisable plan to adopt with regard to those projected professorships; but we cannot help alluding to the incomplete arrangements in our universities, where many important subjects are ill attended to or left untouched for want of an endowed professor, and many others because they are committed to teachers already engaged in other and different pursuits. None of our universities, for example, possesses a separate professor of clinical medicine—a professor whose sole business it should be to devote himself to the cultivation of *clinique*. This is well known to be a branch of medical

science which in France is kept quite distinct and apart from other avocations, and is accordingly attended with signal advantages. Those who undertake it in this country hold it in connexion with other appointments—perform it perfunctorily—and deem themselves not particularly obliged to it as a duty. A most important part of medical education is thus unwarrantably neglected.

We might apply nearly the same remarks to certain other chairs, which it were advisable to establish in an independent shape—a professorship, for instance, of mental alienation; and, perhaps, one of bibliography and medical literature. The advantages that would arise from the appointment of able men to such chairs as these, must be obvious. But how slowly such arrangements are made without some authoritative and efficient injunction, is known to every observer of the schools;—how slowly, for example, are professorships of medical jurisprudence beginning to be established throughout the kingdom: though now introduced into many private establishments, they are not to be found in more than one university, in that of Edinburgh; Dublin, though so well appointed in other respects, has no professorship of forensic medicine, and the same may be said of other quarters; but the universities are notorious for the sluggishness with which they adopt any thing in the shape of an improvement.

Of the propriety of conferring place and pension on medical men, it becomes not us to speak; but considered as men of science, we think with the writer of the Review, that this would be one great means of arousing and encouraging their emulation. It is true that places of wealth and emolument are open to physicians as to other men; but there is no preference—no place reserved as a reward for superior merit and ability,

and in which the talents of the individual so preferred might be *exclusively* devoted to the advancement of medical knowledge*.

COUNCIL OF THE LONDON UNIVERSITY.

To the Editor of the London Medical Gazette.

SIR,

I do not think it incumbent on me either to acknowledge or to deny the force of the observations made in the leading article of your last number, on the misrule which exists in the medical school of the University of London. But in contradiction to the assertion that the Council, which is the body that governs the Professors, is “entirely composed of lawyers and merchants,” I beg to inform you that there is one exception in favour of the medical profession. Dr. Birkbeck, who is one of the members of the Council, is a medical practitioner: he is also a lecturer, though not in any of the medical schools; but it is known that he frequently intersperses medical topics in the prelections which he delivers to the “operatives,” at the London Mechanics’ Institution. (See the reports in the public journals.)

This inaccuracy on your part, in omitting all reference to Dr. Birkbeck, may, in the opinion of some persons, affect the general statement which you made—that the interests of the medical profession were not represented in the Council of the University of London. Now it is of importance that the qualifications of the Council to regulate the concerns of the medical school should be fully recognised; for by the constitution of the University it is required that the medical professors should impart a ready and an implicit obedience to the decisions of their superintending body. We have already seen how this obedience is exacted—under the terrors of the greatest indignities being com-

* In reply to a correspondent who inquires in what manner the enormous sum of 235*l.* is expended by our government on men of science—which it may be remembered we stated to be the case in our former article on this subject—we beg leave to say, that we rather inadvertently in this instance gave the government more credit than they were entitled to; the three stipendiary officers of the Royal Society (senior secretary, 105*l.* per annum; junior, 110*l.*; and foreign secretary, 201*l.*) being, we understand, paid out of the private funds of that learned body.

mitted even on those whose services are the most valuable.

Your obedient servant,

A MASTER OF MED. AND SURG. L.U.

December 4.

We have some difficulty in making out the drift of the preceding letter—in determining whether it be meant as a defence of the Council, and a compliment to Dr. Birkbeck, or as a sneer at both. Certes, however, our correspondent does us wrong in representing us as having said that the Council was “entirely” composed of lawyers and merchants. Our expression was, “almost entirely,” and *almost* is a very convenient qualifier, which often covers many things of great importance, but which here covered only Dr. Birkbeck. We were quite aware of his being a member of the Council of the London University: who that knew any thing of that body was ignorant of it? He is indeed greatly belied if he were not the chief promoter of some of the most extraordinary appointments which took place. Apropos of such matters, we hear that Dr. Gordon Smith has resigned, and there is rather an amusing anecdote connected with the circumstance. The *on dit* is, that the Doctor sent in his resignation just before the recent regulation of the Apothecaries was promulgated, by which students are, after the ensuing year, to be compelled to attend lectures on Medical Jurisprudence. This to be sure was rather vexatious; still, however, recalling the resignation offered an obvious means of retracing the false step. This accordingly was done; but, behold! the Council, with unusual promptitude, had already acted upon the first hint, and it was declared to be “no mistake.” Other resignations of more importance, we understand, have occurred;—Dr. Conolly, it is said, does not lecture after the present season, and rumour whispers that another, and very distinguished teacher, has for some time felt his *affinity* for the University a good deal loosened by the attraction of the *pile* which is erecting at Somerset-House.

ST. JOHN LONG.

A TRUE bill was found against this person on Wednesday last, for manslaughter. The trial is to come on as soon as Mr. Long, who is residing at his house in Harley-Street, chooses to surrender!!! It is thought he may possibly do so on Monday.

REGULATIONS OF THE SOCIETY OF APOTHECARIES.

WE have received a letter containing the following queries, connected with the Regulations of the Society of Apothecaries: we transmitted them to Mr. Watson (the secretary), who obligingly furnished us with the answers, which we append to each interrogation, for the benefit of those concerned.

Query 1. Are the two years attendance on lectures and hospital practice meant to occupy two entire *successive* years; or is it meant that two winter sessions, commencing in October and ending in April, comprising four courses of lectures and hospital attendance during those two sessions, be sufficient to constitute the required time?

The Court of Examiners do not require that two *entire successive* years should be devoted to lectures and hospital practice; nor do they require four courses of lectures on any branch of medical science, nor any hospital attendance during the first year.

2. Will an apprentice be admitted to an examination, who is permitted by his master to commence his studies in London at the end of the fourth year of his apprenticeship; or, in other words, would the last year, or half year of his apprenticeship, devoted to medical study in London, be considered as a completion of the five years' servitude?

An apprentice will be admitted to an examination who has been *permitted* by his master to attend *all* the required *lectures* and *hospital practice* during his apprenticeship; and the time thus spent will be considered as so much of his apprenticeship.

3. Is it required that an apprentice should be 21 years of age before he commences his course of study in London; or would it suffice if he be 21 years old at the time of his examination?

It is not required that an apprentice should be 21 years of age before he commences his course of study in London, but he must be of that age before he can be examined; and although an apprentice may, with the permission of his master, commence his attendance on lectures at any age, it is not advisable that he should do so until he has completed his 19th year, unless he is an apprentice in London, in which case he may with advantage begin to attend lectures in the very first year of his apprenticeship.

4. Is a youth now in his medical apprenticeship considered as having commenced his study in medicine, and thereby exempt from the operation of the last or new regulations, in like manner as the pupil who commenced his attendance on lectures, &c. in London on the 1st of October, 1830?

The Court of Examiners have stated in the last regulations, that *all students* whose attendance on *lectures* shall commence on or after the 1st of Jan. 1831, must observe these regulations.

5. Would four winters, or four half years in regular succession, or at irregular periods, be computed as the two years' attendance in London, as required by the last or new regulations?

Four periods of six months each, either in regular succession or at irregular periods, will be computed as two years, provided the order of succession pointed out by the regulations has been observed by the student in his attendance on lectures and hospital practice.

6. In case of the illness of a student while prosecuting his medical studies in London, whereby a loss of time (say half a year) might occur, will he be required by that half year's loss of study to continue six months longer in London to complete the two years' attendance which the new regulations require; or would the half year's loss of study go unnoticed by the Court of Examiners?

When any case of this nature arises, the student should state all the circumstances attending it to the Court, who will give it such consideration as it may appear to merit.

7. Are the medical schools at Paris recognised by the Court of Examiners on the same grounds as those of Edinburgh, Dublin, &c.

They are.

THE LATE DR. NUTTALL.

WE beg to direct the attention of our readers to a subscription for the widow and children of this gentleman, which has been instituted by the praiseworthy exertions of a zealous friend of the deceased—Mr. Tucker, of Howland-Street. Dr. Nuttall, who was most enthusiastic in the pursuit of his profession, but who met with many untoward circumstances, was suddenly cut off in the midst of his career, without having made any adequate provision for his family.

Subscriptions are received by the medical booksellers.

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

HOPITAL ST. ANTOINE.

Cases of Amputation at the Knee Joint, with observations, by M. Velpeau.

CASE I.—In the month of Jan. 1830 a lad, nineteen years of age, was admitted at the Hôpital St. Antoine. He was exhausted with pain and diarrhœa, having very extensive necrosis of the right tibia, and earnestly demanding to have it removed. The operation was appointed for the 14th of the same month. Hoping to find some portion of the bone sound, I divided the skin circularly, a little beneath the tuberosity of tibia, and made the section of the flesh immediately beneath the condyles. I then found that I had been mistaken as to the limits of the disease, which extended completely into the joint.

I resolved to remove the limb at the articulation, and as there was not enough of integument behind, I endeavoured to form a flap before: the wound, however, was but imperfectly united, there being a space of about an inch uncovered. Nevertheless the cicatrix was completed in two months, and the lad now enjoys good health. The stump bears the weight of the body on a wooden leg, just as if the amputation had been performed in the usual situation.

CASE II.—A man, 29 years of age, of good constitution, was sent to the Hôpital St. Antoine, May 24, 1830, in consequence of having received a comminuted fracture of the left leg. A great quantity of blood had been lost, and large spots of ecchymosis were observed on different parts of the limb. The swelling, however, was inconsiderable, and there was but one wound, and that of small dimensions, situated above the inner ankle. The common apparatus was applied, but delirium of a furious kind, and accompanied by the most extraordinary movements (a delirium to which the patient had been previously subject, from an injury of the head) came on during the second night, and continued unabated for five days. It was then discovered that the lower third of the limb had become gangrenous. Three deep incisions exposed the seat of the fracture: the fragments of the tibia were bare, and bathed in a soft black corrupted mass: one of them extended to within a fifth of the upper extre-

imity of the bone. The mortification, although it was not distinctly bounded, did not make sensible progress, and the rest of the limb not only did not become more swollen, but after a few days even became less tumefied in the vicinity of the knee. On the other hand a copious ichorous suppuration, excessive pain, fever, and diarrhœa, soon took away all hope of a favourable termination if an attempt was made to preserve the limb.

The state of the knee, (which could only be preserved to the extent of three fingers breadth beneath the patella,) as well as of the cellular texture, the muscles, and even of the bones, the fracture of which extended into the joint, rendered it impossible to think for a moment of amputating in the continuity of the limb; and not wishing to go so high up as the thigh, without absolute necessity, I resolved on amputating at the knee-joint, which I accordingly did on the 4th of June.

Constrained, by the state of the parts, to neglect the ordinary method of proceeding, I was obliged as it were to devise one which was new; and the following is the manner in which I proceeded. There was no flap either before or behind; the skin divided circularly, on a level with the tuberosity of the tibia, was dissected and turned back after the ordinary method to the extent of two inches. I then opened the joint at its anterior part, and traversed it without difficulty from before backwards, in order to terminate with the division of the great vessels. I thus obtained three inches of integument, and which would have probably united by the first intention, if the appearances of bruising, which were still visible at the inner part, had not led me to prefer the opposite mode of proceeding. An attack of fever, which soon became severe, rendered bleeding necessary on the first and second days; as to the rest, nothing occurred till the sixth and seventh days, when a superficial erysipelas spread over the stump, and brought back the fever. The application of poultices, and other means, so far subdued this, that, except two small collections of pus at the condyles, matters went on tolerably well. The convalescence was retarded by an attack of indigestion, from some indiscretion in diet; but the patient, nevertheless, was entirely well by the sixtieth day.

CASE III.—In the month of July,

1830, I had to examine, at the Central bureau of Hospitals, a young man, twenty-nine years of age, who had lost his limb seven years before, and who came to request another wooden leg. It was at the *Hôpital des Enfants* that he had undergone the operation, and this was performed at the knee-joint. The cicatrix is behind; and although the inner condyle, an inch longer than the other, alone rests upon the artificial leg, this individual does not the less walk with the same ease as if the limb had been removed below the knee.

The method which M. Velpeau concludes by recommending is this. The skin is divided in a circular form, three or four fingers breadth beneath the patella, without involving the muscles. In dissecting it for the purpose of turning it back, it is necessary to preserve on the inner surface the whole of the layer of fat and cellular membrane, and not to deprive it of its capillary vessels. An assistant is then to lay hold of, and retract it towards the knee, until the ligament of the patella being divided, the instrument comes upon the interarticular space. The surgeon then divides the lateral ligaments; separates the extremities of the bones, by bending the limb a little; detaches the semilunar cartilages; cuts the cross ligaments; and concludes by dividing the vessels and nerves on a level with the reverted integuments. After having tied or twisted the popliteal artery, and the branches which may require it, the integuments are then brought together with the angles above and below.

The conclusions drawn by M. Velpeau are—

1. That the objections to amputation at the knee-joint are without foundation; and that it is in all respects preferable to amputation of the thigh.

2. That it is less dangerous, and more easy than amputating at the thick part of the condyles, as practised by Larrey, &c.

3. That the circular incision is then best adapted to it, unless some particular circumstance should render the method by flap absolutely necessary.

4. That it permits the patient to use a wooden leg in a convenient and satisfactory manner.

5. That it ought to be adopted in all those cases in which amputation of the thigh has usually been practised.

Lancette Française.

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE,

DELIVERED BY DR. ELLIOTSON,

November 29, 1830.

Various cases—Colic from Lead—Scurlatina.

I HAVE given you, gentlemen, a regular account during the present season of every case admitted under my care, and have likewise endeavoured to mention every case that has been presented or has ended fatally. There are three cases of which I spoke during the past month as having been admitted, but of which you have not heard me speak subsequently; I will, however, supply the deficiency by stating, that these three patients never came into the hospital. I mentioned the admission of a patient with what appeared to be an inflammation of the membranes of the spine—one who appeared to have a syphilitic eruption—and one an inveterate porrigo or scald head. These three patients, although admitted by me, went away immediately. This is a very common occurrence, and generally arises from the necessity of all patients, when admitted, finding a security—some housekeeper, who will engage to find them clean linen, and bury them if they die: such security they are frequently not able to procure. They also change their minds sometimes, and after we have taken the trouble of carefully investigating the case, they go away before the next visit.

There was a case of rheumatism presented which escaped my observation on Monday last: it occurred in a female, and affected the chest. She was admitted on the 28th of October, and was presented on the 4th inst. It was a case very like that of rheumatism of the chest, of which I spoke when contrasting rheumatism of the chest with pleuritis. The patient was in Mary's ward, and was cured simply by the application of leeches to that portion of the chest which was in pain.

There was a case, also not spoken of, among the men, admitted on the 28th October, and presented on the 11th November, which was exactly similar to the case of the woman who I said laboured under inflammation of the spine and made so abrupt a departure. The man was *æt.* 19, and had been ill only six weeks. I found extreme tenderness over the spine, and pain extending occasionally on one side towards the anterior parts. It was of the pain in the anterior part only that he complained. I presumed this was an inflammatory state of the membranes of the spinal marrow at that particular part where I discovered the tenderness. Had I not made this minute examination, I might have supposed from a superficial examination that the case was one of chronic

inflammation of the liver. It was cured simply by the frequent application of leeches to the region of the spinal marrow. To it they were altogether confined, none being applied to the side, although one half of the pain was seated there.

There was a man presented the week before last of whom I did not speak, and who was admitted during the present season with chronic inflammation of the hip joint. It was not rheumatism, for he had no affection of any other part, and the thing had come after a sprain. After carrying a heavy load, he found pain of the right hip, which went through the groin, was very much increased on coughing, and caused numbness all down the thigh; sometimes numbness on the front of the thigh; sometimes severe pain there; sometimes very severe pain at the hip-joint, and tenderness on pressure. He had been ill for six months, but by the vigorous application of cupping-glasses and making his mouth tender, I was able to present him perfectly well on the 11th instant. In this case, if I had applied a few leeches, or taken five or six ounces of blood by cupping, it would have done him no good, or good not worthy of notice. He was cupped to a pint on two occasions; the first cupping, however, had no effect, his mouth not having then become tender. He took three grains of calomel twice a day, and then became perfectly well. It is remarkable that the pain down the front of the thigh was greater than that of the hip, and by his own desire I applied two blisters on the front of the thigh—the seat of complaint, however, was in the hip-joint. You are aware that in the hip-joint disease the pain is frequently severe about the knee, and sometimes it extends to the foot. In this case the chronic inflammation was evidently in the hip-joint, from the tenderness on pressure; but pain, acute and severe, occurred all down the front of the thigh.

Having made up for these omissions, I now proceed to the consideration of the events of the last week.

There were admitted during the last week eight patients under my care, four women and four men. One of the women laboured under simple dyspepsia—another under rheumatism—one under St. Vitus's dance—and one under laryngitis from a syphilitic ulcer. Among the men was admitted a case of dyspnoea, which appeared to be an irregular form of asthma—a case of chronic inflammation of the hip—a case of rheumatism of the joints—a very severe case of acute lumbago—a case of bronchitis—one of bronchitis and diseased heart—and one of chronic peripneumonia. There were ten presented during the week, some of them having laboured under very interesting complaints.

Two cases of rheumatism were presented from Jacob's ward, which had occurred after syphilis, the exhibition of mercury, and

catching cold. One was cured with mercury and blisters. I will not dwell upon it, because these cases are so very common. In the other case, the disease was much worse at night than in the day; but the same treatment was adopted, and both these persons went out well, not very long after their admission.

You will recollect that a man went out of William's ward with a large abdomen; he was by no means well, but his wife was sent to the tread-mill for stealing shirts, and he thought it his duty to follow and console her. I could not satisfy myself of the nature of the complaint: the abdomen, however, was very large at the upper part, and there were two or three small ventral herniæ in the midst of the enlargement. I could just ascertain the existence of fluctuation in the centre of the upper enlarged part: I could not find any thing like a distinct margin, as though the liver were enlarged; all that I could observe was, that the upper part of the abdomen was tense, hard, and very large, and afforded a little fluctuation. It is very possible, but I can hardly give an opinion on the case, that there was an encysted tumor, with fluid contents, under the liver, pushing that organ forwards. I have seen such cases frequently. By actively purging the man, and by rubbing him with hydriodate of potash, in the form of ointment, he was much better, his health improved (for when admitted he was in a state of debility, and had anasarcons legs), and the tumor considerably diminished. I find the friction of this salt very useful in many enlargements of the abdomen, as well as of other parts; and if the patient can bear active purging at the same time, so much the better. Had there been merely an encysted tumor, the purgatives were not likely to do good; but between them and the hydriodate of potash, however, he got considerably better. I cannot tell whether to ascribe the improvement to the ointment or to the purgatives, the latter of which consisted of supertartrate of potash and jalap, which he took in full doses twice a day. If there really were an encysted tumor, and not any enlargement of the liver, I should ascribe all the benefit to the salt. There probably was both visceral enlargement and an encysted tumor.

Colic from Lead.

In the same ward was a very good case of colic from lead, which was treated simply (as most diseases may be, if you can at once make an accurate diagnosis both of the genus and the variety of the disease), and the man went out well. It occurred in

Thomas Passmore, æt. 52, who was admitted on the 4th of November, and presented on the 25th. He said that he had been ill a month, that he had had no stool for three days, and that during the whole month he had never had a stool oftener than that. He was labouring under violent pain

of the abdomen, such as is vulgarly ascribed to a twisting of the intestines—*tormina*; but on pressure there was little increase of pain, or, rather, some portion of the pain was diminished. But besides the pain, which thus appeared to be of a spasmodic character, there was tenderness. The tenderness was inconsiderable, and on making pressure he felt considerable relief, though he felt soreness; and therefore the case was, no doubt, one much more of spasm than of inflammation, though of both. The pain was greatest about the umbilicus. He had had no sleep for some time, from the pains in the back and limbs. This is a fact worthy of notice. The pulse was only 72, and was full and soft, and therefore material inflammation was out of the question, and the principal part of the affection evidently consisted in spasm. He had not vomited, his face was not flushed, and his skin was cool. I asked him if he had been exposed to lead, to which he replied in the negative; and I, of course, could not say that he was not speaking the truth. I gave him a scruple of calomel, and ordered him to take half an ounce of castor oil every two hours afterwards, till he was purged. He said at night that the pain was more severe, and he had had no motion. The gentleman who saw him in the evening gave him another scruple of calomel and a grain of opium, this being followed by castor oil: his bowels then became opened, and two stools occurred.

It is the custom of many excellent practitioners to give opium in large doses at the first, with the purgatives, and I have no doubt that it is a very good practice, provided you give purgatives briskly, for the opium can then do no great harm, and possibly may do good—may act, in fact, indirectly as a purgative, by lessening the spasm. This, I believe, is almost the only instance, except extraordinary idiosyncrasy, in which opium opens the bowels; but still in this disease the ultimate effect of opium is to leave the bowels more confined than before, and therefore I am not in the habit of employing it. I think I have found that the cases do as well when you give simple purgatives as when you administer opium. I am not, however, speaking decidedly on this point. I have not seen a sufficient number of cases to say whether simple purgatives, or their union with opium, will answer best; but I believe, so far as my observation has hitherto gone, that full doses of purgatives will answer as well without opium as with it; and as, though opium do good in the first instance, there is ultimately a chance of the bowels becoming the more sluggish, I have fallen into the habit of giving purgatives without it, and my cases do just as well as the cases of those who give opium in addition.

However, this man took but one grain of opium, and but once, so that no inference can be drawn here; he took forty grains of calomel, and two or three ounces of castor

oil : all this opened his bowels, and the spasm was got the better of ; but now more or less of an inflammatory state came on in a decided manner. There was tenderness of the abdomen ; a severe pain down his thighs ; the tongue was brown, and his face became flushed. It is also to be remembered, that he said he had had a fall upon the abdomen six years ago, and that, of course, rendered the abdomen more liable to inflammation whenever an exciting cause was applied. I found it necessary the next day to bleed him to syncope, to put on twenty leeches, and to follow that by a poultice of bran. It was subsequently necessary, in two days, to apply twelve leeches to the abdomen, and after their application he did very well.

For opening the bowels in colic, I believe one of the best plans is to give a large dose of calomel, say a scruple, for securing the operation of other purgatives given in repeated doses subsequently. A large dose sits on the stomach as well as a small one, and does not operate violently. An injection of three ounces of oil of turpentine at the same time is very useful ; this medicine might be given by the mouth, like the other purgatives. When all things fail, dashing cold water on the belly and legs has often succeeded, just as it sometimes does in spasmodic retention of urine. The introduction of tobacco smoke into the rectum ought never to be omitted, when the case proves rebellious to ordinary measures. There is a little apparatus for this purpose ; and when faintness and the pulse show the system to be influenced, you should desist from the insufflation, and after a time, if the bowels do not relax, repeat it. Sydenham had so high an opinion of this in constipation, from his experience, that he says, *Ego fumum nicotianæ sive tabaci ex tubulo inverso per vesicam majusculam in intestina validissime insufflatum, enema omnium quæ mihi innotescunt hactenus, efficacissimum esse duco.*

After his colic and inflammation were cured, he had severe pains in his limbs, and for them employed the hot bath, which quickly and entirely removed them.

Now the occurrence of these pains strengthened my original suspicion that the man had been in the way of lead. When colic occurs from cold, or an obstruction in the intestines within or without (for any thing that obstructs them will cause colic, whether, for example, the pressure of a strictured abdominal opening in hernia, or a collection of hard feces within), whatever causes it, if it be not lead, there is seldom pain in the back and in the extremities. The occurrence of pain there in the first instance made me ask whether he had not been in the way of lead, and he denied that he had ; but when I saw, after the colic was gone, that the pains were severe in the extremities, and the warm bath took them away, I had still stronger suspicions, and questioned him over and over

again, till at last he said he had been engaged in painting a ship (he was a seafaring man), but could not have supposed that that produced the colic, or he would have said yes when I asked the question. Patients will continually tease you in this way ; they will not give a plain and true answer, but will be guided by what they think. Although he had been in the way of lead, yet, because he thought it could not have hurt him, he denied it altogether. This is a difficulty that you will every day meet with in investigating cases. Although, however, he had only been engaged in painting the vessel but one day, he had been exposed to the effluvia of lead afterwards, of course, till the paint was dry. This exposure again had occurred, he said, some little time before the colic began. This might be correct ; but the exposure might have left a disposition to colic, and then an accidental cause have brought on the complaint. This is just what we see in ague, where persons have been exposed to malaria ; ague frequently will not appear at the time, but the tendency to the disease, nay, perhaps the poison itself, being in the system, they will go on for a long period, perhaps several months, and then the disease will appear if they take cold. So it might have been with this man with regard to lead ; accidental circumstances might have acted upon the predisposition acquired by his exposure to the lead.

When colic arises from lead, it is often preceded, accompanied, or followed, by these severe pains in the loins and extremities. When you give lead internally as a medicine, you will find that if you are obliged to give it in large quantities the most severe pains of these parts will sometimes result. You may keep the bowels open during the exhibition of the superacetate of lead, and prevent all colic, but frequently severe pains in the extremities come on afterwards ; and these are best removed by the warm bath, or by colchicum, but I believe that the warm bath answers better than any thing else. It is among the peculiar effects of lead to produce violent pains in the back and the extremities.

There is another observation to be derived from the consideration of this case, namely, that although colic is a spasmodic complaint, it is very liable to become an inflammatory one—it is very liable to become enteritis. We see this every day in colic from strangulated hernia. The symptoms are at first colic, the pain comes and goes, and there is no pyrexia ; but after a time, sooner or later, you have tenderness of the abdomen, and all the marks of abdominal inflammation, and ultimately mortification. It is just the same with colic of all kinds ; if there be the least obstruction, and it is unremoved, inflammation is sure to appear ; and if it be removed, yet if this is not effected in good time inflammation may still come on.

Here the disease had lasted, more or less,

a month, and the opening of the bowels did not prevent inflammation; indeed what was mere tenderness the first day he came to the hospital—slight tenderness of the abdomen—soon became extreme tenderness, his pulse got up, his face became flushed, his tongue brownish, and it was necessary to bleed him. Independently of this, you will often find it useful to bleed in colic, just as in the early stage of strangulated hernia, or spasm of any sort throughout the body, for relaxation of spasm is often effected by bleeding. If the pulse be full, and the person strong and in the prime of life, it is often a good practice to bleed; it produces relaxation of the whole frame, and consequently it relieves the parts that are in a state of spasmodic contraction among the rest. This is a good practice also on another account—it tends to prevent inflammation; but the moment signs of it appear, you ought to treat the disease as of an inflammatory character. If the colic had not presently yielded, I should have bled this man; and although it did yield, yet, as tenderness increased, I lost no time in bleeding him the next day. It is also to be remembered in colic, that no antiphlogistic measures can do good if the obstruction continues in spite of them and other means, for it keeps up the inflammation. I recollect being called to a man twelve months ago, who was labouring under a dreadful colic after drinking a quantity of rum. The pain was much diminished by pressure; pressing with the whole weight of my body on the abdomen with both hands lessened his pain materially, but his obstruction never gave way. Oil of turpentine was given both by the mouth and the rectum, and every sort of purgative was administered; opium was also given in full doses, but none of them produced any effect—none of them would open his bowels; inflammation supervened, and he died. It appeared that this colic came on in a moment, and, by post mortem examination, it was found that one portion of the intestine had passed within another—that intussusception had taken place, and adhesion had also occurred around the intussuscepted part, and the intestine was completely obstructed, so that nothing, of course, could have relieved his complaint short of opening his abdomen and operating upon a portion of the intestinal tube. This, however, could not have been effected in this instance, because there was no indication of an obstruction in one part of the abdomen more than another—no pain in one spot more than another—no tumefaction or induration. Although some surgeons have performed this operation, it is a practice that one would hardly be inclined to adopt, unless in some rare cases where the situation of the obstruction was very clear, and the person in certain danger, and yet not sunk too far.

Scarlatina.

There was likewise presented in Williams'

ward a case of scarlet fever, affording a very good illustration of that disease, and of the treatment which it is best to adopt for guiding the disease, so that it may go on mildly, and torment the patient but little. It was, like most of these cases, in a young subject, and occurred in a boy named

James Harris, æt. 10, admitted into Williams' ward on the 11th of November. He had been ailing for a month, but on the 9th of November was seized with rigors, which were followed by heat, pain of the head, and sickness. On the 10th of November a redness of the skin was observed about the chest, which on the 11th had extended over the whole body. He complained of a sore throat the day the complaint appeared, for the first time, and there was at his admission on the 11th an ulcer on one tonsil, covered by an ash-coloured tenacious exudation, such as is generally considered a slough. The tongue was tremulous, and red round the edges; the pulse frequent and small—as much as 150; he complained of pain in the forehead, sickness, and heat, with great thirst; bowels rather confined.

You know that scarlet fever belongs to the exanthemata of Dr. Willan; that it is a disease which occurs only once, and affects children particularly. I believe its recurrence in the same person is not more frequent than that of small pox or measles. Dr. Willan says, that among 2000 cases he never saw it occur more than once; but that it does do so, the same as measles and small pox, is undoubtedly true. There are exceptions to this very general rule.

Many persons are insusceptible of this disease, not merely adults but children; many children who are as much in the way of it as others never have it. I myself never had the disease, though continually exposed to its infection, and there are hundreds and thousands of others who have not, although, like me, they have gone through the common diseases incidental to childhood, such as small pox, cow pox, chicken pox, whooping cough, and measles. It is thought that children are more liable to this affection than adults, but I do not know that this is quite proved. In childhood we are exposed to the contagion as much as at any other period, and are therefore as likely to catch it as at any other period; and further, as when we have had it once we cannot have it again, adults for the most part must escape without the disposition to it being at all greater in infancy than afterwards. If you suppose an equal susceptibility of the disease during the whole of life, as all are exposed to its infection, from infancy upwards, and scarcely any have it a second time, of course the greater number of instances of the disease must occur in children. Scarlet fever is not so usual a complaint by any means, whether in children or adults, as the measles and small pox. It is not certain what is the period that elapses between the

application of the contagion and the appearance of the disease. I believe, with respect to all contagions whatever, that there is a great variety, and I do not think that there is any rule for any of them, because we see where we can make accurate observation, as in gonorrhœa and syphilis, that there actually is a great variety. Scarlet fever is said to appear within four or five days in general, after the contagion has been applied. The interval is longer generally in adults. It is not exactly known how long a person is capable of giving the contagion after he has had the disease, perhaps not longer than two or three weeks, except desquamation of the cuticle continues; and the exfoliations appear so impregnated with the poisonous secretion of the skin, that they may give it as long as they continue to be formed. How long they may retain the contagion after separation, I do not know.

The disease generally begins, as it did in this child, with a feeling of general illness, pain of the head, and chilliness, which is soon followed by heat, thirst, and sickness, and all the symptoms of pyrexia. There is this difference in the early period of this disease between it and small-pox, namely, that in small-pox there is frequently intense pain in the loins, sometimes dreadful pain, especially in adults, such as would almost make you fancy an inflammation that might induce suppuration, and great tenderness of the epigastrium—symptoms which do not occur in scarlet fever. If a person, therefore, be taken suddenly ill, and you suspect the appearance of an eruptive disease, and yet there is no violent pain of the loins, and no extreme tenderness of the stomach, you have not the least reason for supposing small-pox. In measles, before the eruption, there are generally catarrhal symptoms; you see the eyes running; you hear the patient sneezing and coughing, and the whole face is flushed, and the head very heavy. That is not the case in this disease: it does not so much affect the conjunctiva and the air passages, whether nostrils, larynx, or bronchiae, as the measles: there is nothing like catarrh; and, therefore, when you see violent symptoms of catarrh, you may suppose that the disease will be measles, and not scarlet fever. When the eruption has begun a short time, there generally can be no doubt as to its true nature: minute red points appear upon the face and neck, extremely small; they soon become innumerable, run together, and form continuous patches over the trunk and extremities within twenty-four hours; the patient then looks almost as if he were a boiled lobster, or had been smeared with raspberry-juice; it is a bright scarlet colour, that does not appear in measles, or in any other disease; the hue is most vivid at the flexures of the joints, and in the loins; the efflorescence is especially continuous round the fingers, seldom so much so

on the trunk. The skin altogether is smooth in this disease; but if you examine it very minutely, you will find exceedingly minute asperities, like the *cutis anserina*, where the skin is naturally rougher than in other parts. The small points of the skin become a little inflamed, and consequently there is not a coarse roughness, such as may be felt in the face under measles, but a minute roughness, which may just be felt with the very ends of the finger; but for this you might say there were merely red patches of the skin.

You are not, however, to suppose that what are called cutaneous diseases are mere diseases of the skin; they are all called cutaneous diseases, it is true; but it would be wrong to suppose that they are limited to the skin. In measles, the mucous membrane of the nostrils, the conjunctiva, the mucous membrane of the air-passages, often down to the very air-cells; nay, occasionally the substance of the lungs and the pleura, and even the intestines, are much affected. In small-pox there is often great affection of the larynx, such as frequently destroys life; a great affection, also, of the epigastrium; the stomach is particularly tender, and is really inflamed from the very first. So in the case of scarlet fever, you are not to consider it a mere disease of the skin; it certainly does not much affect the eyes or the nose, but the inside of the mouth, the tonsils, the *velum pendulum palati*, the pharynx, and the tongue, often most intensely. These effects are more or less observed in almost every case, and in some instances the parts are affected to a violent degree, so that their state particularly co-operates in causing death. There is likewise in this disease sometimes an inflammation of the stomach and intestines; the mucous membrane of the alimentary canal is affected below the pharynx, so that there is tenderness of the epigastrium, and sometimes there is, as I shall presently mention, inflammation of the head, inflammation within the chest, the lungs, as well as in the abdomen. In all these diseases, the inside of the head often suffers extremely; more or less inflammation occurs there. These are diseases really of almost the whole system.

The case which I have now mentioned was one of that form of the disease called *scarlatina anginosa*. There are three forms of the disease: the first of which is simple, in which the skin only is affected, or rather the affection within the mouth is inconsiderable, not worthy of notice. In the second variety the throat is affected considerably; hence it is called *scarlatina anginosa*. If this occur, which it sometimes does, with a disposition to mortification, the disease is then called *scarlatina maligna*.

The present case was one of *scarlatina anginosa*; it was a mild case, but still it affected the throat, not however severely. It is generally on the second day of the person's

illness that the eruption comes out, and it generally lasts a week altogether; on the fourth day of the whole disease the affection is at its height; about the fifth it declines, so that interstices and patches reappear; about the sixth there is an indistinct eruption only, and on the seventh it is usually gone before the end of the day; and on the eighth and ninth the cuticle is seen coming off. In the mildest form of the disease the tongue is red, but if there be much inflammation of the mouth, that species of the disease properly called scarlatina anginosa, you see the tongue not only red, as if the mucus upon it were sprinkled with grains of cayenne pepper, but the papillæ are so elongated, as well as red, as to project considerably through the mucus. The tonsils, and the velum pendulum palati, are entirely red, and you see them covered here and there by dirty exudations, or sloughs; and these, of course, vary in quantity, so that between it and the tumefaction the patients can sometimes scarcely swallow or breathe. It is diseased mucus in the one case, and when it is removed you see the inflamed surfaces below; when it is a real slough an ulcer is seen on its removal, *i. e.* in the anginosa, when the inflammation of the throat is intense. In this state the general symptoms are much more severe; there is more shivering at first, and afterwards more intense heat of the body. The heat is so intense as to be at 107°, 108°, or 111°; but even in the mild form of the disease, where the throat is scarcely affected, you will find the heat very intense. The eyes, too, are affected, and so is the nose, but nothing like to the degree that you see these parts in measles, though sometimes the face swells so that the eyes are closed. It is observed in this form of the eruption that it does not come out on the second day, as in the mild form, but at a later period, nor does it fully come out: it comes and goes, and the disease does not terminate so decidedly altogether, and the desquamations will continue for some weeks. In this severe form of the disease the symptoms are all severer from the first to the last. When there are symptoms of great malignity, there are signs of great debility; the throat is in a state of dark sloughing; mortification takes place, and the most putrid smell is perceived, and for the most part the patients die.

Now in this case one ulcer occurred upon the left tonsil; when the ash-coloured slough was removed, an ulcer appeared under it.

The treatment consisted simply in keeping the patient clean and cool, and in giving him scarcely any thing to eat. You will find a great number of cases of scarlatina do perfectly well if no medicine be given. This is almost always the rule of treatment, to keep your patient clean and cool, and equally avoid internal stimulants, by giving him as

little food, and that as little nutritious as possible. Thus treated, he is almost sure to do well. You will hear persons say that they have given a particular medicine in two or three thousand cases, and these have all done well; and another will say the same thing with respect to some other medicine. I have no doubt that if they had given no medicines, the cases still would have done well, provided the patients were kept clean and cool, and given only diluent drinks. There can, however, be no doubt of the propriety of one sort of medicine, and that is aperients, because an open state of bowels very much lessens the general irritation of the system, by the removal of the unhealthy and disordered secretions which it necessarily produces, and by gently evacuating the vascular system; but I believe that is all that is required in by far the greatest number of cases. There was at one time a great antipathy to purgatives, founded on the supposition that they exhausted. It is mentioned by Dr. Bateman that the patients were first exhausted by the treatment adopted. Fires were lighted in the rooms, the doors and windows were kept shut, additional clothes were put upon the bed, and the patients were kept in such a state of heat and excitement, and so much exhaustion produced, that purgatives were really hazardous. Moderate purgatives, however, are all that are requisite. You must carefully open the windows and doors, according to the season of the year, and let the patient be but lightly covered. This patient was at first washed several times a-day with cold water, and after with tepid water. There is no objection to the application of cold affusion, if you ascertain that the temperature is steadily above 98°, or indeed if the patient merely says he is hot. By merely cold water you will induce perspiration better than by other means, and you will sometimes, it is said, cut short the disease altogether. It is not, however, an object to cut short the disease, because if you so put an end to it, the patient will most likely have it at another time, and as it is begun he may as well go through it: the object is to lessen, rather than remove it. But whether you use cold affusion, or cold ablation, or tepid affusion, or tepid ablation, you will find that it is exceedingly beneficial. I never omit it, if the patient feels hot, and is not in a profuse sweat. I do not use cold affusion, because I find cold or tepid ablation answer the purpose; but in every case of this disease, where the heat is above the natural standard, I have the patient washed several times a-day, as long as the heat continues, with either cold or warm water, whichever he prefers. I never yet lost a case of this disease.

It is to be regretted that the French do not seem yet to know the value of cold water in fever. M. Rayer, whose work on

cutaneous diseases, coming after Willan's, and founded to a great extent upon it, is altogether a far better and more copious work, says that the application of cold water to the surface is too much extolled by the English, and we should not go beyond wetting the epigastrium. Yet he acknowledges that he has never dared to employ it as directed by Corrie, Withering, Bateman, &c. I know that it is not at all too much extolled; and the comfort of it, to say nothing more, is indescribable. It is our neighbours' fancy that it may produce anasarca. It might, if employed when unnecessary, *i. e.* when the skin was not hot and dry: and anasarca generally follows this disease when the patient has been improperly exposed to cold, and especially cold and wet; but so absurd a misapplication of a remedy is no argument against it. No remedy is such, but when well-timed—*nullum datur remedium quod non solo tempestivo usu tale fiat*. I have seen incalculable good from cold and tepid ablution, but never the slightest harm.

Abstinence from food is of the greatest importance: you should give nothing but tea, barley water, and similar diluents. Bleeding generally, but particularly locally, from the head, throat, chest, or abdomen, is sometimes required. When the throat is affected, you will find that one of the most useful applications is the chloride of soda or lime. This was used, in this instance, around the bed; but you will find it one of the most serviceable gargles that you can employ. You must remember, however, that children cannot gargle the throat, and sometimes adults are in such a state that gargling is out of the question, and you must then apply it by means of a syringe, squirting it all over the mouth and fauces. This should be done every hour or two. The solution should be diluted, so as not to produce pain; and I have continually employed it now for the last two or three years, and certainly with the most beneficial effect. It comforts the patient; it causes the ulcerations to assume a healthy appearance, and throws off the sloughs. It is of great use also to employ the chloride of soda or lime about the bed; but the latter is generally used for these external purposes. It would appear that the chlorides of lime and soda have a tendency to destroy contagion, and on this account I sprinkle it upon the bed-clothes, have it thrown upon the removed linen, and place it in saucers around the bed, and introduce it into the vessels which are used by the patient for the purposes of nature. Were it only to lessen febrile, its use in every sick room in the latter mode is a great comfort. I adopted the practice in this case because I know that this is an infection which is particularly apt to spread, and so many children are always in the hospital. I recollect the circumstance of a patient being admitted

into a ward with scarlet fever, and children and young men in that ward, for nearly two years afterwards, were continually seized with scarlet fever, notwithstanding the hospital is thoroughly whitewashed and cleaned once a year.

Where malignant symptoms come on, it may be necessary to use the treatment that is adopted for typhus fever, remarking, however, that it is frequently necessary to apply leeches in this form of the disease, on account of local internal inflammation. There is, however, another thing to be remembered in connexion with this affection—that after it has gone through its stages, the patient is very liable to dropsy. It is a singular circumstance, but one well established, that after scarlet fever children are apt to become anasarcaous—nay, sometimes more than anasarcaous—to have effusion into the head, chest, or abdomen. I believe this occurrence takes place much more frequently in winter and cold damp weather, than at any other time. Hence, allow me to repeat, that however proper cold effusions, or cold ablution, may be, when the temperature is above the natural standard, yet, when the heat is not above the natural point, and after the disease is over, there would be the greatest danger, no less than perfect inutility, in their application.

I believe the dropsy that occurs after this disease is almost always of an inflammatory nature—either a general inflammatory state, or a local inflammation. As in other inflammatory dropsy, the face is affected at the very first. I believe that when effusion occurs in the chest, there is inflammation or sub-inflammation of the pleura; and so with respect to the abdomen, there is peritonitis; and with respect to the head, arachnitis; or at least the state of these parts is inflammatory. I believe that this dropsy is best treated by purgatives, and by leeches applied to the parts in which it particularly occurs, whether it be the head, chest, or the abdomen. If there be hydrocephalus or ascites, or hydrothorax, or if there be not—in all cases purgatives are the best remedies, adopting local bleeding if you find local dropsy, and having recourse in intense cases to bleeding from the arm. It is said that digitalis answers a good purpose, that it controls the pulse, that it excites the secretion of urine, and that it lessens the inflammation altogether. Many cases do well with slight or even no treatment; but I believe the best general rule is to treat the disease in the first instance, if this be not counter-indicated, on the anti-inflammatory plan.

There are some other cases of importance presented, which I should mention; but as our time has elapsed, I shall defer their consideration till the next lecture.

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LECTURES

ON

COMPARATIVE ANATOMY,

AS ILLUSTRATIVE OF

GENERAL AND HUMAN PHYSIOLOGY,

*Delivered in the Medical School of
Birmingham,*

By S. LANGSTON PARKER.

LECTURE VI.

*Of the Senses generally—Mechanism of the Skin,
and Physiology of the Sense of Touch, in
different Animals.*

GENTLEMEN,—Our preceding lectures have been devoted to the consideration of the nervous system, or that division of the economy which is constituted of those organs exciting the actions of all its other parts. The central nervous system is the perceptive portion of an animal body, *i. e.* it judges of the impressions received from organs placed on the exterior, which impressions are transmitted from these organs to the brain by the communicating nervous trunks. The nervous centre itself is not, however, capable of acquiring any knowledge of external objects except through the medium of apparatuses, termed senses, which are appropriated to the distinction of all the characters of bodies existing in the universe.

It must be evident, that to judge correctly of the property of any body, three things must be required: 1st, an external sensitive organ adapted to the property of the body to be ascertained; 2dly, a nervous cord, to transmit this sensation to the central mass; and consequently, a central organ, to perceive it. Thus, to complete the office of the senses, three distinct organs are found in all animals where these parts are most numerous and perfect. For example: in the eye, we have an optical instrument, situated before the nervous agent, to collect the image

of the object to be perceived, and to picture this upon the retina, the brain being made sensible of the impression of this image by the agency of the optic nerve, which is a medium of communication between the sense and the sensorium.

An animal deprived of the external senses may be said to live within himself, as he is destitute of all communication with the world around him; to him, colour, sound, heat, and cold, give no pleasure, neither do they produce any pain.

This is the permanent state of the lower animals, as the zoophytes and vermes generally, these animals possessing but one rudimentary sense, which is exercised by the imperfectly organized integument covering the body. The senses are, strictly speaking, the most striking peculiarity of animals, and constitute more especially what is termed the animal life, and likewise the life of relation, by which the animal provided with them extends his relations, and lives not only in himself, but in connexion with surrounding bodies. The senses in the most perfect animals and in man are five in number; one of them being termed a general, and the remaining four special senses.

The general sense is that of touch, since it is possessed in nearly a uniform manner by all the parts of the integument of the body, and is supplied, not by a special nerve, but by branches from the whole system. The remaining special senses are those of smell, taste, hearing, and sight, for which we have the peculiar organization of one nerve of the economy only for each sense. These senses appreciate all the properties of bodies; they could neither be increased nor diminished. An additional sense would be useless, since there is no property in nature not ascertained by those we already possess:—a decrease in their number would render the animal imperfect, since he must be, by its loss, deprived of a part of his relative existence. The senses of taste and smell have been termed chemical in their actions; whilst the functions of touch, sight, and

hearing, resemble mechanical agents in their mode of operation. In the two first the organ is formed by a membranous expansion, on the surface of which the nerves terminate in soft papillæ, covered with mucus, which is thus intermediate to the body to be perceived and the nerve, and tends to prevent the irritation being carried to such an excess as to produce pain, which would evidently be the case were the extremities of the nerves undefended. When the contact is established, a galvanic chain is formed—the action is produced and transmitted to the pulpy extremity of the nerve by the mucus.

The senses of vision and hearing are mechanical in their operation, being formed by tubes or cavities containing fluids, communicating with the external parts of the body by one extremity; at the bottom of these fluids, as the vitreous humour of the eye and the fluid of the vestibule, semicircular canals, and cochlea, the nerve is expanded in form of membrane, and by the external operation of light and sound an undulation is produced in these fluids, which is propagated to the nerve, and subsequently by it to the brain.

The sense of touch or tact is evidently the most general and the most important. It is the most general, since it is not only possessed by all animals, but, in addition, by all parts of every animal. It is uniformly possessed by all parts of an animal body, though one or more of these parts are peculiarly modified, in order to render it better adapted to the perfection and the performance of this sense.

The function of touch is generally considered by physiologists under a double point of view, viz. that of tact, which is the general property of all parts of the enveloping integument, and that of touch, which is alone possessed by the prehensile extremity, as the hand of man and the quadrumana. The seat of tact is the skin generally, this function being modified by the different organization of the part in man and animals: its perfection depends upon the delicacy of the skin, on the abundance of its nerves, and on the absence of the insensible parts which cover it. In the mammalia, the skin is always composed of four layers, distinct in their organization and properties. The most internal, or that by which the tina dermis is connected with the other parts of the economy, is the muscular envelope, the *pannicule charnue* of the French anatomists, of which in man we have an example in the platysma myoides, dartos, and occipito-frontalis muscles, this muscular membrane being more or less extensively spread over the whole body in quadrupeds, by which a distinct motion is given to any part of the skin.

The first component part of the skin, properly so called, is the derma, cutis, or chorion. It is the thickest and strongest por-

tion of the cutaneous envelope, is the base of its organization, and on the surface of which the other organs are placed. It is composed of condensed cellular tissue, the fibres of which are more or less compact, according to the different parts of the body, being firmer on the posterior surface of the trunk, where the chorion is principally destined for a defence, and more lax on the anterior, where its sensitive property is more strikingly developed. It is in the cells of the tissue of the chorion that earthy salts are deposited, to constitute the crustaceous skins of various echino dermata, as the lobster and astersias. It is this portion of the integument that limits the form of the animal, and gives it those varieties so extensively diffused through nature: whilst the remaining membranes are concerned more especially in the sensitive functions of this apparatus, it is the chorion that protects as well as gives form and beauty to the subjacent organs. In man it is thin, as he is provided, by means of his reasoning powers, with other means of defence beside those which nature has given him. In several of the mammalia, on the contrary, as the pachydermata of Cuvier, to which order belong the rhinoceros and elephant, the density of the organization of the chorion enables it to resist a musket-ball. In the invertebrata generally, the distinction in the several portions of the skin is no longer apparent. The interstices in the substance of the chorion, which are more numerous on the anterior than the posterior surface of the body, give passage to the various veins, nerves, and arteries, which are distributed on its surface, and which there form a distinct membrane or body, termed the papillary body, from its being composed chiefly of the papillæ or capillary extremities of the nerves. The capillary body, which is the true seat of sensation, has been subdivided by Bichat and De Blainville into another element, termed by them the *resseau vasculaire*, or vascular network: this part is the web formed by the extremities of the arteries and veins on the surface of the chorion, and can be rather conceived than demonstrated. It does not appear to be distinct from the papillary membrane or body. This structure is most manifest on the pulps of the fingers in man, on the sole of the foot in the mammalia, and on the lips. The termination of the extremities of the nerves on the whole surface of the chorion form a complete nervous envelope (under the epidermis and rete mucosum,) which is essentially and solely the seat of touch: the residence of this property never varying, it must be evident that the disposition of the nervous papillæ is similar throughout the whole animal kingdom, the exercise of this function being alike in all, and not varying as the organs of the special senses. The third element of the skin, the

rete mucosum, corpus reticulare, or rete glutinosum of Malpighia, is a semifluid expansion covering the whole surface of the body, immediately under the epidermis: it is hardly perceptible in the inhabitants of temperate climates, and in them is so thin that Bichat has actually denied its existence. In the negro races it becomes very apparent, and the layer of pigment is more evident as the colour of the skin approaches more and more that of the black. This part of the skin is essentially the seat of colour, and is the residence of all those beautiful varieties met with in the skins of animals. Its colour is different in almost every order of animals—it is black, brown, grey, white, yellow, green, gold, or silver, or copper colour. In the class pisces the pigment of the rete mucosum is very remarkable, and is productive of the various changes of colour in the scales. Not only is the rete mucosum of the negro deeper in colour, but it is actually of greater density in this than the other races, its thickness being in direct proportion to its deepness of colour. It is so thin and fluid in the albino that the sun's rays soon cause vesications, whilst in the negro, epispastics with difficulty produce this effect*.

The pigment of the skin, or rete mucosum, likewise exists upon a part of the mucous membranes, and in the eye on the surface of that vascular expansion of the choroid termed the tunica Ruyschiana.

The pigment of the skin is doubtless produced by the exhaling vessels, and this physiological process has its seat in the vascular expansion, on the surface of the chorion, on the external coverings of the body, and on the membrane of Ruysch in the eye. There appears to be a direct and constant relation existing between the colour of the skin and the intensity of heat and light to which the animal is exposed. It is certain that the beings who inhabit hot climates, and consequently are exposed to the heat of the sun in all its vigour, are remarkable for that depth and variety of colour which is absent in the species dwelling in cold or temperate climates. This difference likewise exists between the fish of the torrid and frigid seas. These facts, however, do not sufficiently explain the true physiological reason of the variety of colour in the pigment of the skin. We are better acquainted with the functions exercised by the black pigment of the choroid; this matter, in the eye, is destined to absorb the rays of light which have passed the retina, and which, by a reflection upon it, would disturb and confuse the image pictured there, a false impression of which would be consequently transmitted by the optic nerve to the sensorium. It is probable that the pigments of the eye and skin are analogous in their structure; they appear to be composed entirely of the globules of the blood, rendered black (as they exist in the

eye) in the act of exhalation; their various colours being assumed likewise during this process. What proves the identity of the pigments (the cutaneous and ocular) is, that in the albinos the absence of the colouring matter of the eye and skin is always uniform; if it be wanting in the eye it is likewise so in the skin, and *vice versa*; the two always fail simultaneously. The colours of the hairs, feathers, and nails, are due to the presence of the same pigment, which does not differ from the ordinary rete mucosum of the skin. In the albinos the hairs and nails are invariably white.

The pigment, which is to determine the subsequent colour of the skin, is not deposited in its situation till after birth, at least not to any extent. This can hardly be determined in the inhabitants of European climates; but if the skin of a young negro be examined immediately after birth, it will be found that the colouring matter only exists around the roots of the nails; subsequently it is secreted upon other parts of the body, but first at the roots of the hairs, where the vascular system is in greatest activity; it gradually darkens the whole surface of the skin, and becomes more abundant as the person advances in age. The imperfection and incertitude of vision in young animals appears to arise from a deficiency in the quantity of black pigment in the eye. In the negro race the pigment is darkest and in greatest abundance. The Mongolian, or Asiatic race, is frequently denominated the yellow variety, from the predominating influence of this colour in the pigment of the skin. The American is likewise termed the red, or copper colour, from the same cause; and the European, or Caucasian, the white. We cannot doubt, in examining comparatively the inhabitants of different climates, that light and heat are the principal causes of the variety of colour in the rete mucosum. The rays of a tropical sun appear to stimulate the vascular net work of the skin to throw off an increased exhalation of pigment; and we see in this climate that the persons and parts of the body which are habitually exposed acquire a proportionally darker tint than those which are constantly sheltered and defended. The black pigment is occasionally deposited under the epidermis in Europeans. A part of the skin may become black, and produce that affection termed "melanism" by Dr. Blainville*. It consists in the ordinary coloured integument putting on over a part of the body (particularly the breasts) the colour of the skin of the negro; it occurs, I believe, only in pregnant women. Le Cat and Camper have recorded cases.—The deposits of the black morbid tissue,

* Cours de Physiologie Générale et Comparée, par HOLLAND. Paris, 1839-30.

† Le Cat, "Traité de la Couleur de la Peau Humaine," p. 130.

Camper, "On the Connexion of Anatomy with Painting," by Dr. Cogan. p. 15.

* BÉCLARD, *Éléments d'Anatomie Générale*, p. 259.

termed melanosis, in any of the internal organs, is nothing more than an *error loci*, as it were, of the pigment of the skin under another aspect or colour. The varieties in the colour of the pigment met with in the animal kingdom are almost innumerable; there are as many colours in their integuments as there are shades in the solar spectrum. These varieties are numerous among the mammalia, in whom the most remarkable are the brilliant blue and red hues on the face of certain baboons. In birds, the brilliancy and difference of colour are peculiarly remarkable in the feathers, and rarely in the skin itself; whilst in all the other classes the colouring pigment is found immediately under the epidermis. Many of the colours of the animal kingdom are owing to a peculiar refraction of the solar rays, caused by the disposition of the organ from which they are refracted; this is the case principally in the class aves; for if the feather be plunged in water the colour is changed, which would not be the case were it owing to that of the pigment.

The epidermis is a transparent pellicular membrane, covering the rete mucosum, and forming (as its name indicates) the most external layer, or envelope, of the elements composing the totality of the skin. Numerous theories have been presented on the formation of this membrane; it has been considered to be formed, in the first instance, by the induration of the external layers of the rete mucosum; from the pressure of the waters of the amnios during utero-gestation; and, subsequently, by the pressure and desiccation of the atmosphere. Bécclard considers it (and with the greatest degree of probability) to result from an excretion of the dermis; it is the indurated face of the rete mucosum, so that, from the most internal element of the skin, which is the chorion, or cutis vera, to the most external, there is a regular gradation of organization and vitality, which renders the epidermis a species of varnish, only participating in the general life of the body by its mode of origin, which renders it peculiarly fitting to support the action of exterior bodies, and to protect the vessels, nerves, and subjacent portions of the integuments*. In animals continually exposed to the desiccating action of the atmosphere, the epidermis appears folded in different ways, corresponding with the duplicatures of the skin upon which it lies. In those provided with scales, the epidermis envelopes them in every part, the scales themselves being produced by the rete mucosum. The epidermis of the mammalia generally resembles that of man; in the pachydermatous tribes it is remarkably thick and dense; in the pisces and amphibia it resembles the organization of the internal epidermis, or that covering the mucous membranes.

The epidermis, to which Blainville* proposes to give the name of *ceratine corneine*, or horny matter, on account of its properties, presents us with an additional number of varieties, which constitute the epidermoid system, or its products and dependencies. We have seen that it takes the name of epidermis when disposed as a covering to the skin, and epithelium when met with upon the internal integuments, or mucous membranes. Besides these parts it forms all the varieties of hairs, horns, scales, feathers, and according to some anatomists, the teeth; all these organs resulting from the successive deposition of ceratine or epidermoid membrane, secreted by the vasculo-nervous pulp of the bulb of the hair, feather, or nail.

In the human subject the hypertrophy of parts of the epidermoid system constitutes what is termed ichthyosis, or fish-skin disease, in which the exhalation of the ceratine becomes morbidly increased, and resembles the scales of fishes, or the epidermis of pachydermatous animals, as the hog or rhinoceros.

In the mammalia, the ceratine, or horny exhalation of the skin, constitutes the epidermis, the nails, the claws, and the teeth of cetaceous animals, and of the ornithorynchus or duck-billed animal.

In the aves, in addition to the common epidermis and the claws, we find the ceratine forming the feathers, the beak or horny covering of the mandibles.

In the reptilia it constitutes the scales and horny prolongations of the claws.

I shall now briefly call your attention to the accessory portions of the skin, and to their formation. The accessory organs of the integuments are the hairs, feathers, scales, hoofs, and claws, with some other parts which are peculiar to a few animals or species; and in addition to these we have the mucous or sebaceous follicles, or cryptæ, and the bulbs or generative organs of the accessory parts, to which Dr. Blainville has given the appellation of *phanère*.

The mucous or sebaceous follicles, or cryptæ, are minute bags disseminated more or less over the whole surface of the skin, tending to preserve the epidermis from the action of the surrounding elements, and likewise to guarantee the integuments from any injury by friction on those parts which are continually exposed to it, as the axillæ and groin. The cryptæ or mucous follicle, considered generally in the series of animals, is composed of a fibrous envelope (situated in or under the substance of the dermis, but most frequently the former), open at both extremities, by the inferior of which the arteries, veins, and nerves are introduced, which are productive of the secretion to be formed, which is thrown off by the opposite or superior extremity, opening by a minute duct upon the surface of the epidermis. The

* Bécclard, op. cit. p. 265.

* Cours de Physiologie Générale et Comparée, par Holland.

functions of this follicular secretion are different, as the nature of the fluid secreted is different, in various animals, and in various parts of the same animal; it is of an oily nature in man, where it is destined to lubricate the skin, to preserve the pliability of the epidermis, and to defend this part from friction; its nature varies in the internal integuments, where the disposition of the cryptæ is precisely analogous, and where the secreted fluid is accessory to the perfection of a sense or function; its viscid qualities augmenting the activity of the sensations of taste and smell, and its chemical properties (of whatever nature they may be), being subservient to the actions of the stomach in digestion. In the pisces the follicular secretion is a viscid gelatine, insoluble in water at the ordinary temperature. This fluid, enveloping the skins of the pisces and aquatic animals generally, is so much more abundant as the animal is covered with a soft skin and is destitute of scales; this prevents any adhesion between them and the element in which they move, and serves the same purpose in facilitating their transit through water that greasing the bottom of a boat is known to do*. In the genus *squalus*, the follicles, or cryptæ of the skin, have their excretory ducts of the magnitude of a quill, and form the best subjects for the study of this part of the economy. The other varieties of this secretion present few varieties in the animal series that merit any distinct notice.

The bulbs of the hairs, feathers, and nails, are composed, like the cryptæ, of fibrous envelopes with open extremities, one admitting the nerves and vessels, and the other giving passage to the excreted portion of the hair or feather. To this system (the bulb and its products) Professor Blainville has given the name of *phanère* (from the Greek derivation *φανeros*), because the excretion, or produced part of the bulb, is evident or manifest, whilst that of the cryptæ is not so. The interior of the bulb is filled by a pulp, secreted evidently by the vascular system of the bulb, which is living and sensible in proportion to the quantity of nervous and vascular ramifications which it receives. It is this pulp which produces or excretes the inorganic or dead part of the *phanère*, which particularly merits the name, because in most instances it is exterior and visible. The hair itself is secreted by the vasculo-nervous pulp of the bulb, under the form of successive elongated cones, which are formed of an external envelope, seemingly a continuation of the fibrous part of the bulb; and an internal pulp, which ascends to a greater or less distance in their substance. In their passage through the epidermis and pigment of the rete mucosum, the hairs carry before them a layer of each

of these parts; the epidermis being detached under the form of minute transparent scales, and the layer of pigment carried forward by the point of the hair giving to it its peculiarity of colour. A strict analogy exists in the formation of feathers, the nails of man, the hoofs and claws of the mammalia and birds, and the scales of fishes: in the single hair the bulb is likewise single and isolated; but these parts are agglomerated or compound when nail or hoof is to be formed. These garments of animals, from their texture, are bad conductors of heat, and are well calculated for preventing external heat or cold from affecting the animal temperature. The cutaneous appendices of animals likewise exclude moisture (from being oiled), either by unctuous fluids exuding through the skin, or from their being applied to it by the voluntary act of the animal. Nature has given to birds in common, and particularly to those which are aquatic, oil bags for this purpose, which are nothing more than conglomerate cryptæ of the skin secreting an unctuous fluid, and opening externally by a common duct. In other instances the cutaneous appendices are merely weapons of defence.

Such are the principal component parts of the skin, and in reviewing for a moment the numerous functions of which it is the seat, we shall see how important an organ this is in the economy. It is the protecting investment of all the subjacent organs, being the only mode of defence which some animals possess; it likewise gives form and beauty to the various parts of the body. It limits the extent of the animal in space, and to the consideration of this property of the dermis, in which alone it is seated, Dr. Blainville has devoted a whole chapter, in his "*Principes d'Anatomie Comparée*." The chorion or dermia, then, is the defensive portion of the integument, and is the base of all the rest, as the bulbs of the hairs, and vascular and nervous capillaries, are in it most abundant. Its vitality is more exalted than that of any other part of the economy. The papillary body covering the cutis is the seat of tact or touch; the rete mucosum the residence of the infinite varieties of colour; and the epidermis deadens the irritation produced by the contact of foreign bodies, which, without its presence, would be carried to such an extent as to produce pain, were these bodies applied directly to the denuded extremities of the papillæ. Besides these properties, the cutaneous investment is the seat of absorption and excretion, and an accessory organ of respiration, throwing off a certain proportion of carbon, and taking up a proportionate quantity of oxygen. Thus the skin transpires and absorbs; is the protecting investment of the body; is the seat of touch and colour. It is through the external integuments and

* Abernethy, Physiological Lectures.

their continuation (the mucous membranes) that every substance must pass into, or out from, the internal organization of the body. There is scarcely a point of its surface unprovided with the extremity of a nerve, an artery, a vein, an exhaling and an absorbent vessel.

We shall consider, for a few moments, in what way the skin is the unique residence of the properties of touch, and in what manner in man and animals each of its component parts contributes, in a greater or less degree, to the perfection or diminution of the sense. The sense of tact, or passive touch, is possessed by all animals without exception in the lower orders, which are deprived of all the special senses: this, which we term the general sense, acquires a peculiar degree of perfection, for by it they are enabled to seize their prey, and to perceive the most delicate undulations of the medium in which they live; some physiologists have even gone so far as to say, that the tact of the zoophytes was sufficiently perfect to enable them to distinguish colour and sound. Active touch, or touch properly so called, is only perfect in the higher animals, and in man and the quadrumana this property is possessed by the hand. In the human subject this function is perfect, or at its maximum of development. In the first place, it is evident that the nervous papillæ developed on the surface of the chorion are the organs by which the impression of bodies is received and transmitted to the spinal cord, and by it to the brain, since the posterior roots of the spinal nerves alone are those concerned in the function of the sensibility of the skin of the body, excepting the face. The remaining elements of the skin are subservient to its sensitive properties, tending to facilitate the contact of bodies, or prevent that contact being productive of pain: the chorion gives to the integument that solidity necessary to enable it to support, without being torn, the forcible contact of dense bodies; the rete mucosum, by enveloping the extremity of the papillæ, preserves them in that state of moisture requisite for their perfect and necessary actions. The erectile tissue, or papillary body, the termination of the arteries and veins, forms a species of vascular cushion, in which the papillæ are placed, under the form of small granular points, this disposition tending to place the nervous papillæ in more immediate contact with the body to be perceived, and consequently to facilitate the impression to be produced. The epidermis limits the degree of impression produced by the contact, and as this membrane fails, or is too thick, the impression is painful or too feeble. The adipose cellular tissue, situated under the skin, also gives perfection to the sense by making the integument tense, and applying it more effectually to the body affording the

impression. In every animal the tactile function of the skin will be more delicate and exquisite as this organ is provided with a greater quantity of nerves, and is deprived of accessory parts, as hairs, feathers, or scales. Under this point of view, few animals are so well organized as man; his skin is provided with a large mass of nerve, and almost entirely deprived of accessory parts. Nature seems to have sacrificed in him that function of the integument which relates to its protecting property, to exalt and perfect its actions as an organ of touch: whilst in animals the skin is frequently covered with hairs or scales, which in them constitute either articles of clothing or organs of defence, that of man is entirely naked. It is necessary that reason should here supply the want of those parts of which nature has thought proper to deprive him, and the want of these is in a great measure compensated for by the exquisite delicacy of the tactile property of the integument. It has been said that, in descending the series of animals, as the special senses of sight and hearing became abolished, the function of touch or tact was more delicate and exalted, and in the lowest animals this property of the skin enabled them to distinguish the presence or absence of light, and the slightest modifications of sound. These functions of the zoophytes seem to be owing, however, rather to their instinctive powers than to the operation of any special or general sense, and due to the exercise of the same phenomena which directs the leaves of plants to turn towards the light*.

We now come to offer some remarks upon active touch, or touch properly so called. Among the various properties of bodies of which passive touch or tact gives us any idea, there are some which cannot be justly appreciated by the general and ordinary disposition of the skin, and which require, in order to ascertain them, a special or particular character, not met with uniformly in the disposition of this membrane. These properties are chiefly form and volume; tact makes us acquainted with the temperature of bodies, but their form and volume are not to be ascertained without the modification of the skin in such a manner that it may embrace and examine the surfaces of external agents. Thus in man and the higher animals there is always a region of the tegumentary membrane specially organized to render it an organ of touch. The organ of touch presents us with numerous varieties in the animal series, but it is always constructed so as to answer certain conditions:—1. The common tactile sensibility is in it always very much exalted; the nervous papillæ are there always extremely numerous and large, and better adapted to appreciate the properties

* Adelin, Physiologie, &c. t. i.

of bodies, as the common integument of the organ of touch is always deprived of hair, and rendered more tense and fitter of immediate application to the surfaces of bodies, by the increased deposit of adipose cellular tissue beneath it. The skin is there rendered more moveable by embracing different parts, as the fingers or claws, and not being continuous in surface, as on the other regions of the body. In animals generally, the organ of touch is likewise the organ of prehension—a circumstance of peculiarly happy construction, since the two faculties which the organ executes thus give to each other a mutual assistance and support; touch guiding us in the prehension or seizure of bodies, and prehension assisting the tactile property in applying the skin to every point of their surface.

The organs of touch in the animal kingdom are extremely varied, and it would occupy the space of a single lecture merely to enumerate them. We shall mention merely the principal varieties. This property resides sometimes in the tentacula or the antennæ; at others, in the lips, the tongue, the feet, or the tail. In man and the quadrupeds, in which the sense is most perfect, the organ for its performance is the hand. Two circumstances are requisite to render the sense of touch perfect: 1st, the division of the hand into fingers more or less numerous, long, distinct, and moveable; 2dly, the delicacy of the skin which covers them, and the absence of appendices for defence, as voluminous nails or claws. The greater the number of the fingers, and the more varied and complex their mechanism of motion, the more perfect is the hand, considered as an organ of touch. This mechanism arrives at its maximum of complication in man, who possesses this sense in a most eminent degree, and in him also the bones forming the hand are most numerous, the articulations most extensive, and the actions of the muscles most varied. The quadrupeds, or apes, have the hand organized in a similar manner to the human subject, but they are not able to move the fingers separately, and are not possessed of any proper extensor or flexor muscle. In them also the thumb is so short that it cannot, in its actions, be opposed to those of the fingers, and in this opposing power resides the faculty of seizing thin and minute objects. The chiroptera, or bats, have been described by Spallanzini and others as possessing a sixth sense, by which they, being blind, are enabled to move with celerity in dark caves, and in the dusk of evening among branches of trees and other obstacles without striking or touching them. This sixth sense, however, does not appear to exist in nature, and this property in the genus chiroptera appears to reside principally in the perfection of organization of the tactile function of the integuments, extended

between the bones of the metacarpus and the phalanges. The membrane which unites them presents to the air an enormous surface. The nerves which are distributed to it are numerous and extremely minute, forming a true rete mirabile from their tenuity and number of their anastomoses. It is probable that in the action of flight, the air and tract, by this sensible wing or hand, gives to the organ a sensation of heat or cold, of mobility or resistance, which indicates to the animal the obstacles he may meet with in his route. It is by the same power that the blind man discovers, by the vibration of the air upon his face, the vicinity of a wall, the door-way of a house, the corner of a street, before touching them, from the variation in the vibrations of the atmosphere alone*. In the plantigrada, the fingers or claws of the anterior extremity are short, and admit of little motion, and the sensation of touch in them, as in most quadrupeds, must be limited to mere contact upon the pulpy erectile tissue so evident upon the sole of the anterior extremity of the dog and cat. In the lower animals, and indeed in all the classes inferior to the mammalia, the organs of touch present little for our consideration. In all it is rather a general than a special sense. Besides the complexity of motion established in the bones and muscles, rendering the hand a perfect instrument of touch, in applying it with more facility to the surfaces of bodies, there are other properties to be sought for, without which the sense would be but imperfect: these reside in the skin and subjacent membrane. The modifications which depend upon the skin, as rendering it perfect as a tactile agent, are,—1st, the thinness and flexibility of the dermis; 2nd, an increased quantity of nerve and nervous papillæ, which become, in the most perfect state, evident on the extremity in the dermis; 3rd, a diminution in the thickness of the epidermis. All these are possessed in their highest degree of perfection in the hand of man; and in addition to this, a pulpy erectile tissue is found under the dermis of the extremity of the fingers, which renders the integument tense, and constantly fit for application to discover the various properties of bodies. Placed at the extremity of the arm, the hand has in this member a long lever, which enables it to seize objects at a distance. We may conceive how the hand—formed of twenty-seven bones, moveable upon each other, and subdivided into carpus, metacarpus, and phalanges, each provided with a different degree of motion—can mould itself to the form of external agents, and examine the disposition of their surface. We see the advantage which the bones of the metacarpus possess, in varying the concavity of the palm of the hand; and the power of opposi-

* Cuvier, *Lçons d'Anatomie Comparée*, t. ii.

tion in the thumb to the fingers, enabling them to seize and hold firmly minute objects. At the same time the skin has, as we have seen, more sensibility than that in any other region of the body. Under these various points of view, the hand is the most ingenious organ of touch that could be imagined, and the human hand the most perfect in the creation; that of the quadrumana, besides being subservient to touch, is adapted to station and progression upon four extremities, and consequently the epidermis, from this cause, must be thickened, and the sensibility of the nervous papillæ partially destroyed. Philosophers have gone so far as to say, that the rank man holds in the creation is owing to the superiority of his organs of touch. This is an error—the hand is but an instrument under the guidance of the intelligence, and if man is the first of animals, it is to his intellectual faculties that he owes his supremacy. It is however certain, that in the series of animals the hand is more perfect as the animal is more intelligent; so that by the structure of the hand we may judge of the degree of intelligence possessed not being the cause, but indicating in a direct relation the extent and perfection of the reasoning powers. The immediate actions of the organs of touch are to make us acquainted with the variations of temperature; its mediate functions are to transmit to the sensorium the ideas of the general qualities of bodies—as their weight, size, figure, and consistence. It is for the appreciation of these properties, which cannot be ascertained by the other regions of the skin generally, that the organization of the hand is especially required—it is the hand which we naturally employ to judge of the qualities. I have mentioned, and it thus becomes extremely easy to analyse, what is the peculiar function of the hand, and what likewise is the general action of the skin; the sensation of the distinction of temperature being the property of the latter, the notions of figure and density being acquired solely by the former.

From the preceding view of the structure and physiological actions of the skin in men and animals, we can determine the precise action of each of its component parts, and ascertain which are the essential and which the accessory organs relating to the exercise of the sense of touch.

It is evident that the tactile function of the integument resides in the papillary body existing on the surface of the chorion; this body forming a complete nervous envelope, with which the animal is at all times surrounded, and which forms the chief seat of his relative existence, in establishing his connexions with surrounding bodies. The structure of the papillæ are uniform in the whole animal kingdom, and the varieties of the sense of touch or feeling are to be sought for

in the accessory organs of the skin, which render the contact of external agents more or less immediate.

These offices are performed by the "rete mucosum," the epidermis, and the appendices of the skin, as feathers, hairs, &c.

The mucous pigment of the skin, by covering the papillæ and keeping them moist, preserves them in a state of constant aptitude for action; and, under this point of view, the skin of the central nations of Europe is the most perfect organ of touch that can be imagined, as the pigment is sufficiently abundant to preserve the moisture of the extremity of the nerve, and yet does not exist to such an extent as to deaden in the slightest manner the impression of external bodies. In the negro races, on the contrary, the pigment is subservient to another function—viz. that of "absorbing the radiant heat of the sun's rays, and converting it into sensible heat*." The sun, which will blister the skin of an European, has no effect on the integument of the negro, in whom the pigment is at its maximum of development, and in which race it is best studied. The thickness of the mucous pigment is in direct proportion with the depth of its colour, which properties appear to be conferred upon it, both in man and animals, to absorb the radiant heat of the sun's rays, since the thick, dark, and vivid-coloured pigments are only met with in the inhabitants of tropical climates.

The epidermis prevents the immediate contact of the papillæ with the element in which the animal dwells†; it likewise, being impermeable to moisture, prevents the skin becoming dry and horny from evaporation; or from being encrusted, from the same cause, with the fluids it pours forth. In the human race generally the epidermis is of such tenuity that it does not impede or in any measure destroy the tactile function of the nervous papillæ. In many animals, as the elephant, rhinoceros, &c. it is so thick as to render this function of the skin very imperfect. In most quadrupeds the epidermis is thinnest on the soles of the feet, which are thus rendered the most appropriate organs of touch. Man is most favourably constituted, as regards the exercise of the sense of touch, in the structure of the epidermis.

That the chief office of the epidermis in man is to preserve the skin from the effects of evaporation, may be proved from the disposition of this part in the pisces, the external layer of the rete mucosum (it will be recollected that we described the epidermis to be nothing more than the indurated external lamina of this body) being fluid, since

* Home, in Philosophical Transactions, 1821.

† Cuvier, *Leçons d'Anatomie Comparée*, t. 2, p. 540.

‡ Abernethy, *Physiological Lectures*, p. 114.

the element in which they live prevents evaporation from the surface of their bodies.

The want of the accessory organs of the integuments (as hairs), of which man is nearly destitute, except in certain situations, as the head, the axillæ, the chest, the pubes, &c. exalts in him the sensitive and tactile function of the skin; whilst their presence in some animals renders the sense of touch or tact very imperfect—their chief use consisting in their being bad conductors of heat, and consequently preserving the animal from the injurious effects of vicissitudes of temperature.

ON THE TREATMENT OF PTOSIS BY OPERATION.

By R. T. HUNT,

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THE usual operation for the relief of Ptos, or falling of the upper eyelid, which consists in removing a fold of the integument, does not appear to be generally followed by a successful result. The reason of this failure is not difficult of discovery. The mere shortening of the eyelid can only remedy the evil when it depends upon the lengthened, and consequently relaxed state of the lid, however produced; not when it is the result of paralysis, or injury of the levator palpebræ.

When the structures composing this organ have suffered detention for a considerable time, owing either to inflammatory deposition, or to pressure from some orbital tumor, or enlargement of the globe, the integuments in particular seem never to regain that degree of elasticity which they before possessed, but remain ever after in a flaccid state, which, although not so observable as the relaxed condition of the abdominal integuments occurring from tension during repeated utero-gestation, still bears a direct analogy to it. This is not the case when the eyelid falls in consequence of paralysis, or injury of the levator. The integuments are, in these instances, rather shrunk than relaxed like other parts when long affected by paralysis; and if much of the levator be destroyed, the lid appears considerably lessened. The same operation cannot, therefore, be admissible in both descriptions of cases. That method to which I have before alluded, and which becomes

efficient by merely abridging the quantity of skin, can only be applicable where the lengthening and relaxation of the lid are the only causes to prevent its being properly raised. And such cases can always be readily distinguished by taking a fold of the palpebral integument between the finger and thumb, and desiring the patient to open his eye, an action which, with this assistance, he will easily perform. Nor can the same operation be available in cases of ptosis caused by paralysis, or injury of the levator, when we consider that shortening the eyelid cannot restore to this muscle the power which it has entirely lost. For if the muscle is no longer capable of contracting, of what utility can it be, to place the eyelid within its sphere of action?

A close attention to the structure of the parts concerned, and their healthy functions, may, however, lead to a more rational mode of operating in these latter instances. In the action of raising the eyelid, the levator palpebræ is not the only muscle brought into play. The anterior portion of the occipito-frontalis also considerably contributes to this effect, by elevating the superciliary integuments into which it is inserted. These muscles act so much in concert, that it is almost impossible to draw the eyebrow upwards, whilst the eye remains perfectly shut, and equally difficult to depress the eyebrow, whilst the eye remains wide open. And when we reflect that the origin of the levator is situated at the very extremity of the orbit, and that it is inserted into the tarsus, a part so easily moved, it becomes evident that, unless this muscle's action were restrained by some other power, the tarsal margin would be drawn too far into the orbit. The anterior fibres of the occipito-frontalis, which are so inserted into the superciliary integument as when in action to stretch the upper part of the skin of the eyelid, constitute this power; and it is with reference to this combination of muscular actions that the following method of operating is recommended.

The operation is performed by dissecting off a fold of integument from the eyelid, and the difference from the usual way of proceeding consists in the portion removed. The upper incision is made immediately below the line of hairs forming the eyebrow, and extends each way, to a point, opposite the com-

missures of the eyelids. In making the lower incision no precise direction can be given. It should approach within a short distance of the tarsal margin, varying in the extent of the portion included between the two incisions, according to the greater or less degree of relaxation of the skin, which is different in any two individuals, and it should meet the upper incision at both extremities. When the intervening portion has been detached, the divided edges should be accurately united by at least three sutures, and the wound dressed in the usual manner.

The effect produced, when adhesion is perfected, is the attachment of the eyelid to that portion of the skin of the eyebrow upon which the occipito-frontalis acts, and by means of this attachment, substituting the action of this muscle in raising the eyelid for that of the levator, which is no longer capable of doing so.

On the first view of this mode of operating, the deformity likely to be produced by the removal of so large a portion of skin, in such a conspicuous situation, or the injury to the motion of the eyelid, may be urged by some as reasons against its adoption. But to both these objections the following case, in consequence of which the foregoing observations were made, will be an answer.

In removing a large, and deeply-seated hydatid tumor from the left orbit of James Garside, a patient of the Eye Institution, about three years since, owing to the connexion of the levator palpebræ with the diseased mass, that muscle was so much injured that, after the patient had perfectly recovered in every other respect, what then appeared an incurable falling of the eyelid remained. Anxious to remedy this evil, (as the man possessed perfect vision, upon raising the lid with the finger) when all tumefaction of the integuments had entirely disappeared, I removed an elliptical fold of skin in the usual way. The wound healed well, but although a considerable portion had been included between the incisions, the effect upon the lid was hardly perceptible. The poor man, after waiting for some weeks, was very solicitous to have another portion removed; and it was more in compliance with his desire than from any expectation of further benefit, that I at length consented to repeat the opera-

tion. Whilst deliberating on the portion to be removed, it struck me that if it was sufficiently near the eyebrow, the action of the occipito-frontalis which affects this part of the skin, might also be available for raising the eyelid, and fortunately, the result fully justified the conjecture. The operation was performed as is described above; the wound united by adhesion, and the patient could raise his eyelid to the same extent as that of the other side.

It is also important to observe, that no deformity was produced, and that the eye could be as perfectly closed as before the occurrence of the disease. Nor is this surprising, when we consider, that there still remains the same extent of conjunctiva lining the lid, as before, and that cicatrices in the eyelids, those caused by the operations for entropion, for instance, are, after a short time, barely visible, owing to the peculiar character of the skin in those situations.

It may be well to repeat, that this method of performing the operation applies only to the following cases of ptosis, viz. those occasioned by loss of power in the levator, whether attributable to actual destruction of a part of the muscle, or to paralysis of the nerves supplying it, caused either by injury or disease.

Upon reviewing the subject, this case appears to me of utility, not only as regards the treatment of ptosis, but also as proving the possibility, at least in one instance, of so modifying one natural action, as to render it an efficient substitute for another, which has become powerless.

The inosculations of arteries, by means of which, when one trunk becomes impervious, the adjacent branches enlarge so as to compensate for its loss, clearly indicate the power which nature possesses of attaining the same end by different means from those originally in force, in the circulatory system. Why then should not the numerous and different combinations of muscular action equally afford the means of adapting the powers of which they consist to various circumstances, dependent either upon disease or injury*?

* North of England Med. and Surg. Journal.

VERIFICATION OF MEDICAL EXPERIENCE.

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To the Editor of the London Medical Gazette.

November 27, 1830.

THE remark, that there are more false facts than false theories, has often been repeated, and its justice as generally acknowledged; but the practical inference it inculcates, that the same jealousy and criticism should be directed towards the former as the latter, has never, as I conceive, been adequately attended to. The publication of a new medical theory is a signal for much ingenious display of talent, by advocates and adversaries; but with respect to *facts*, many of great interest are daily announced, which, as they do not so forcibly stimulate the self-love of the understanding, are too often either indolently adopted, or suffered to pass unnoticed.

The evil consequences of this partiality of attention, in regard to contemporaneous medical history, are both numerous and extensive. Less hazard is incurred in the announcement of facts than in propounding new theories; because there is not the same apprehension of the former being subjected to severe revision and examination, and, consequently, less reflection and care are bestowed on the observation and communication of them. As the discoverer of a pretended new fact has little chance of attracting sufficient notice, unless he can invest it with some adventitious importance, as by making it the ground-work of a system; or can challenge attention by so representing it, that it may interfere and clash with some favourite or established opinion; there hence arises much premature and hasty generalization, and not unfrequently a perversion and abuse of much useful experience.

Medical facts, like many of a different nature, are often more indebted for the interest they excite, and the notoriety they attain, to their having occurred at a fortunate conjuncture, when general attention had already been turned in the same direction, than to their real and absolute importance; while so far from this coincidence being

always favourable to the elucidation of truth, the interpretation of facts too often takes an undue bias from their relation to some prevailing system and theory, and thus their *timely* occurrence has frequently served rather to confirm the inveteracy of error than to extend the limits of experience. It is evident, if such facts were subsequently tested by further observation or experiment, simply on account of their own apparent importance, and not with reference to any momentary interest arising from their relation to prevailing subjects of investigation, science would be much benefitted by the change. From the tardiness with which medical facts, unless rendered artificially striking, engage general attention, it likewise results that *utility* is so little consulted in the choice of those which are deemed worthy of publication; more eagerness is shown in communicating what is strange and inexplicable, than in accumulating instances in confirmation of what had been previously anticipated; hence *anomalies* are multiplied before the *laws* themselves are well ascertained, and the attention constantly diverted from close and methodical investigation to the notice of irregularities and eccentricities.

These are but a very few of the evil consequences which are referable to this laxity with which medical facts are regarded and allowed to pass current; enough, however, to leave but little doubt that many of the numerous systems of medicine which have gone through the usual stages of hasty adoption, precarious support, and final abandonment, would not have interposed to check or divert the slow but gradual accumulation of real science, if the *facts* on which they pretended to rest had been subjected to as severe an ordeal as the *opinions* which were promulgated in them; and if some means had been devised as a security against the results of careless, inconsiderate, and partial observation and experiment, being represented as legitimate and undoubted matter of fact.

The cause and extent of the evil being ascertained, it is worth while to consider if it admits of a remedy. It is certain that the statements of facts and experiments undergo a correction or confirmation in the course of time, as well as theories and opinions, but in a way at present tedious, uncertain, and

desultory; for the reason, that there is no court of inquiry regularly constituted, to the decision of which such statements are amenable; but their accuracy or incorrectness remains undetermined, till chance or coincidence of investigation has led others to revise them. For it is seldom that individual inquirers will undertake expressly to verify or refute the practical observations and experiments of others, unless they anticipate that a confirmation of them would be favourable to some preconceived opinions of their own; or, on the contrary, that it concerns them, from a similarly personal reason, to attempt their refutation. In what degree the interests of truth are here consulted may be anticipated from our general acquaintance with the human understanding.

To come, then, to the point. We have societies in abundance, chartered or self-appointed, which afford full and adequate opportunities and inducements for the display of ingenious opinions, for the statement of new discoveries, for animated discussion, and for striking illustration: those that have conceived a new idea, and are anxious to communicate it, need not long want an audience. There are museums for the preservation of beautiful, curious, or anomalous preparations; and libraries where the literary productions of the theorist, experimentalist, or compiler, may be safely deposited. But a society or corporate body, whose labours should be directed to verify the practical statements and observations of individual inquirers, is assuredly a great desideratum. I cannot, therefore, but be of opinion, that it would be in a high degree advantageous to science and the profession if there existed some such society, whose business and duty it should be to put to the test of extensive observation and well conducted experiment, those amongst the numerous practical statement of facts and observations perpetually submitted to public notice, which might be deemed worthy of further investigation; in short, whose occupation and sole purpose should be, the *Verification of Medical Experience*.

Would not the data necessary for the compilation of a rational and scientific Pharmacopœia, be better and more speedily furnished, if a number of practitioners, who held public situa-

tions, were deputed to investigate and report severally the effects of medicines; than when the matter is allowed to rest on the chance suggestions of individuals, on vague experience and general impressions, or on capricious predilection?

Would not much expense of time and temper have been saved, had the disputes of eminent physiologists on the merit and truth of their respective discoveries been referred to the determination of a committee of inquiry competent to settle the point at issue, by more enlarged and multiplied experiment, and so constituted, as to preclude the possibility of personal bias?

Might not much unnecessary cruelty be spared, when experiments on living animals are indispensable, by a similar reference?

In short, are there not in all the departments of medical science, numerous and often conflicting notions entertained, with more or less strength of conviction, on the credit of indefinite, general, and vague experience*, which might receive legitimate confirmation or correction by observations expressly directed to such points, on the extended scale which this plan would admit of?

It is scarcely necessary to develop further the idea of such a society, or to enumerate all the advantages which might be anticipated from it. Its practicability can scarcely admit of a question, in a metropolis where there are so many establishments which would afford abundant opportunities for determining any practical point in a short space of time, compared with what would be required if it was left to individual and chance investigation. It would be the means of inducing, if not obliging, many who hold public situations, to render an account of their stewardship, and give some proof that the tenure of their offices had been made subservient to the interests of science and the objects of humanity, and not been confined to the mere routine of stationary experience.

I should be far from advocating the censorship of medical *opinions* by any public body or society, to the extent at least of passing authoritative judgments

* I need only refer to the paper by Dr. Haycraft, in the Med. Gaz. of Nov. 13, for an illustration of this remark. For what can be more to the point than that the question, whether the sound and impulse of the heart are referable to the systole or diastole of its cavities, should remain to be determined so late as on the present day?

on them, and pronouncing *ex cathedra* on their merits; but no one could fairly object to his statements of matters of fact, observation, and experiment, undergoing ulterior investigation — no jealousy could interfere to discourage the pursuits of talent and industry, when so direct an appeal lay to truth and nature. A check, indeed, would be imposed upon careless observation and experiment, and ill-digested statements of facts, which would but accelerate the advance of science: individuals would be more close observers and accurate analyzers, if they were aware that their assertions, if practical and not simply speculative, would have to abide the test of a prompt and unobjectionable investigation; — while those that were confident of having been faithful observers and just interpreters of nature, would have further encouragement to communicate the results of their experience, when they knew that these would meet with early and decisive confirmation, and would be placed beyond the reach of other contradictory statements, which might be promulgated with equal plausibility, but had not the real foundation of truth.

Enough, possibly, has been said to draw attention to the want, and to hint at the means of remedying it; and I forbear to enlarge upon the subject, by proposing any specific plan of execution, from the reflection how seldom improvements are introduced by direct and obtrusive appeals, or by the abrupt proposal of a scheme for their accomplishment; and further, because in recommending what is new, one can scarcely avoid critically reviewing what is old and established; while such unhappily is often the temper of public bodies, that much caution and *management* are required on the part of projectors, who must seek their partizans among the same class of men whose proceedings, in their collective capacity, they are forced to disapprove or condemn.

Let the government of this country take such interest in the concerns of science as would hold out to her votaries as much encouragement as is offered in neighbouring states: were the increasing funds of real knowledge as much under the guardianship of responsible authorities as the physical resources and current coinage of the realm, and in the same degree secured

against false statements and counterfeit imitations, it would not be left to the feeble efforts of humble individuals to contrive means of insurance against those circumstances which render the intellectual possessions of science as liable to fluctuation and depreciation as material property, and which encumber them with all the disadvantages which arise from false estimates, disputed claims, and imprudent speculations.

But, however desirous I may be to see a more liberal patronage and enlightened regard bestowed in influential quarters upon the labours of scientific men, particularly where they concern so intimately, as in our profession, the welfare of the community, I am not ambitious to figure either as reformer or querulist, nor have the above observations been suggested from any other motives than such as are naturally connected with the occupation, and consistent with the title of

OBSERVER.

ANALYSES & NOTICES OF BOOKS.

“ L'Auteur se tue à allonger ce que le lecteur se tue à abréger.” — D'ALEMBERT.

A further Inquiry into the Comparative infrequency of Calculous Diseases among Sea-Faring People, with some observations on their frequency in Scotland. By ALEX. COPLAND HUTCHISON, F.R.S. L. and Ed.*

On the Tendency to Calculous Diseases, and on the Concretions to which such Diseases give rise. By JOHN YELLOLY, M.D. F.R.S. &c.†

THE profession is indebted to Mr. Copland Hutchison for having first pointed out the remarkable circumstance, that sea-faring people enjoy a comparative exemption from calculous disorders. It appears at the great Naval Hospitals, after deducting the cases of gunshot wounds, &c. only about one instance of stone occurred in 17,200 patients, whereas in the London and Provincial civil

* Medico-Chirurgical Transactions.

† Philosophical Transactions.

Hospitals the number is about one in 400. Such are the results of those inquiries of which Mr. Hutchison published an account some years ago. The present paper contains details on the same subject, derived from correspondents at the principal sea-port towns in England, Scotland, and Ireland, and of which we can only afford space to say, that they fully corroborate the conclusions at which Mr. Hutchison had previously arrived.

Appended to the paper are some observations on the comparative frequency of calculous disorders in Scotland, by which it appears that there occurs about one case of stone annually in every 83,300 of the inhabitants, whereas in England, according to Dr. Yelloly, the number is one in every 108,000 of the entire population. This difference Mr. Hutchison is disposed to attribute in some measure to the circumstance of the lower orders in Scotland living chiefly on coarse farinaceous food, particularly oatmeal cooked in various ways. They also drink freely of strong spirits—whiskey.

A paper by Dr. Yelloly was inserted in the last volume of the Transactions of the Royal Society, in which he gave an analysis of 328 calculi contained in the Norfolk and Norwich hospital. In the one before us the result of his investigations is adduced as applied to not fewer than 663 specimens. The general analysis, arranged in a tabular form, is as follows:—

Calculi consisting principally of one deposit.

Lithic acid	164
Lithate of ammonia	55
Oxalate of lime.....	21
Phosphate of lime	5
Mixed phosphates	35

Calculi consisting of two deposits.

Lithic acid and lithate of ammonia	49
— and oxalate of lime.. ..	10
— and mixed phosphates.. ..	15
— and phosphate of lime.....	8
Lithate of ammonia and lithic acid.....	21
— and oxalate of lime.....	68
— and mixed phosphates	22
— and phosphate of lime	9
Oxalate of lime and lithic acid	15
— and lithate of ammonia	3
— and mixed phosphates.. ..	20
— and phosphate of lime.....	7
— and silex	1

Mixed phosphates and oxalate of lime	1
— and phosphate of lime.....	2
Phosphates of lime and mixed phosphates	3
— and oxalate of lime.....	1

Calculi consisting of three deposits.

Lithic acid, oxalate of lime, and phosphate of lime.....	2
— oxalate of lime, and lithate of ammonia	4
— oxalate of lime, and lithic acid	5
— lithate of ammonia, and oxalate of lime	2
— lithate of ammonia, and lithic acid	2
— lithate of ammonia, and mixed phosphates	2
— acid, oxalate of lime, and mixed phosphates	3
Lithate of ammonia, oxalate of lime, and mixed phosphates	13
— oxalate of lime, and phosphate of lime	13
— oxalate of lime, and lithic acid	16
— oxalate of lime, and lithate of ammonia	7
— phosphate of lime, and lithate of ammonia	1
— phosphate of lime, and lithic acid	1
— phosphate of lime, and oxalate of lime	1
— phosphate of lime, and mixed phosphates	4
— lithic acid, and mixed phosphates	6
— lithic acid, and lithate of ammonia	1
— lithic acid, and phosphate of lime	4
— lithic acid, and oxalate of lime	3
Oxalate of lime, lithic acid, and lithate of ammonia	3
— lithic acid, and oxalate of lime	3
— lithic acid, and mixed phosphates	5
— lithic acid, and phosphate of lime	1
— lithate of ammonia, and phosphate of lime.....	3
— lithate of ammonia, and oxalate of lime	2
Mixed phosphates, phosphate of lime, and mixed phosphates.. ..	1

Calculi consisting of four deposits.

Lithic acid, lithate of ammonia, lithic acid, and lithate of ammonia	1
— oxalate of lime, lithate of ammonia, and phosphate of lime.....	1
— oxalate of lime, lithic acid, and oxalate of lime	1
— oxalate of lime, lithic acid, and lithate of ammonia	2

MEDICAL GAZETTE.

Saturday, December 18, 1830.

“ Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso.”—CICERO.

EXAMINATION OF A MUMMY—ART OF EMBALMING.

AN exhibition of considerable interest took place a few days ago at the Royal Institution. The Asiatic Society had received a mummy, in a present from Sir John Malcolm, and not having sufficient accommodation for any large assemblage of persons, they had it transported to Albemarle-Street, for examination. The care of conducting this process was confided to Dr. Granville, who has devoted considerable attention to the subject of embalming, and who favoured the gentlemen present with a kind of lecture or demonstration.

He began his observations on the dead by some compliments to the living. His Royal Highness the Duke of Sussex, he said, was to have “favoured” the meeting with his presence, but for the pressing nature of his duties “at the first scientific institution of the country,” over a meeting of the officers of which he was even at that moment presiding. He then proceeded to pay a few similar, and equally deserved compliments, to the gentleman in the chair, “in whose hands he was quite sure the interests of science would not suffer,”—and so forth. The Doctor then went on to say something of mummies in general, and of his own discoveries in particular; and by an extraordinary exercise of the digressive faculty, contrived to bring in a description of the proposed new burial-ground at Primrose-Hill—drawings of which he exhibited. He also advocated the propriety of a general embalming of the dead, and recommended to the audience

Lithate of ammonia, oxalate of lime, lithate of ammonia, and mixed phosphates	5
— oxalate of lime, lithate of ammonia, and oxalate of lime	3
— oxalate of lime, mixed phosphates, and oxalate of lime.....	2
— oxalate of lime, lithic acid, and lithate of ammonia	1
— oxalate of lime, phosphate of lime, and mixed phosphates	1
— oxalate of lime, lithic acid, and mixed phosphates.....	1
— oxalate of lime, lithic acid, and oxalate of lime	1
— of ammonia, oxalate of lime, lithate of ammonia, and lithic acid...	1
— phosphate of lime, oxalate of lime, and lithate of ammonia	1
Oxalate of lime, lithic acid, lithate of ammonia, and lithic acid.....	1
— lithic acid, oxalate of lime, and phosphate of lime.....	1
— lithic acid, oxalate of lime, and mixed phosphates.....	1
— lithic acid, lithate of ammonia, and mixed phosphates.....	1

663

It will be observed that one calculus contained silex, making the fourth instance of the kind on record. Two such cases were met with by M. Fourcroy and Vanquelin out of 600 calculi; and one is mentioned by Wurzer. A deposition of siliceous gravel occurred in the practice of Dr. Venables, of Chelmsford*.

Dr. Yelloly confirms the observations of Mr. Hutchison as to the relative frequency of calculous disorders in Scotland, and adds some information, tending to shew that calculous diseases are very rare in Ireland. The only other point to which we think it necessary to allude is, that the infrequency of the disease among sailors, so satisfactorily made out by Mr. Hutchison, seems also to extend in a certain, though not equal degree, to soldiers. Dr. Yelloly states, on the authority of Sir Jas. M'Grigor, that no instance of calculus occurred between Dec. 1811 and June 1814, though above 330,000 cases were admitted into hospital; and that only four cases of calculus have occurred in the army in Britain during the last fifteen years: in Ireland, only one such case has been met with.

* Quarterly Journal of Science, No. xii.

to follow the example of some scientific man, whom he represented as very old—and whom we suppose to be in his dotage—whose intention it is to be mummified as soon as he dies. At length, and just when despair was beginning to seize upon his hearers, the object for which they had assembled seemed fortunately to occur to his mind, and he proceeded to business.

On the floor, in the centre of the theatre, was placed the mummy. The appearance of the external box is probably familiar to our readers, and the present one offered nothing to remark upon. It had been divided at the sides, so as to admit of the top being lifted off; and, as usual, was found to be made of sycamore wood. Contained within it, and fitting as closely as a kernel in its shell, was another box, or coffin, more neatly and carefully constructed than the first; and, like it, composed of sycamore, in a perfect state of preservation: both had a longitudinal band along the centre of the lid or top, covered with hieroglyphics. The second box being opened in a similar manner as the first, displayed within, a case approaching in shape to the human figure, with the face carefully moulded, and with a projecting beard, about four inches long; the whole painted with bands of brilliant colours, interspersed with various symbols, and highly varnished. It had exactly the appearance of *papier machée*, fresh from the hands of the artist, but was found to be made up of several layers of linen, which Dr. Granville conjectures had been steeped in some liquid preparation, and moulded to the shape of the body while in a moist state, so exactly did they embrace it. At the back part was a longitudinal opening, running the whole length of the body, and sewed with strong thread, or rather cord. This ornamented case being removed, a mass still more closely

simulating the human shape presented itself. At a little distance it accurately resembled a body wrapped in chamois leather. A band, which surrounded the head, and was crossed upon the chest, being undone, the general envelope, which was composed of coarse linen, was easily removed, and shewed the body completely cased in rollers innumerable; but so firmly were these attached at every point to the surface, that it was found impossible to remove them otherwise than by tearing them off, leaving, however, a pretty general coating, which remained behind. The body was shrunk, so as to resemble a skeleton, and seemed to have been embalmed by the least expensive method—that of immersion in boiling fluid. The individual proved to be a male, as the beard on the innermost case had rendered probable. On breaking open the abdomen (for the parts broke like dried pitch) some bitumenous looking masses were taken out, but it was quite impossible to distinguish in them the least resemblance to any of the viscera. The chest was not opened, but the examination of the head was interesting. The skull-cap, on which a little hair, dried up and matted, was still perceptible, was carefully sawn through all round, when it came away on the application of very slight force, displaying the *dura mater* beneath, tense as if distended with brain, dry and semi-transparent, with the marks of the blood-vessels perceptible—the longitudinal sinus perfectly so. An incision was made so as to arrive at the cavity of the cranium; it contained nothing whatever but the membranes—even the falx and tentorium were entire and unimpaired, but there was not a vestige of brain, nor any portion of the embalming material, which pervaded every other part. No papyrus, nor indeed any thing but the enveloping cloths and rollers, were found. The height was five feet five

inches and a half; that of the female mummy, described by Dr. Granville in the Philosophical Transactions, was five feet and seven-tenths of an inch.

The exhibition we have described was less interesting in itself than in the reflections to which it naturally—almost unavoidably—gave rise. To see the mummified body with all its paraphernalia fresh and bright and undisturbed, after a lapse of more than three thousand years—to contemplate the thing that had lived and breathed, and had its feelings and affections—its hopes and fears—its little evils to avoid—its purposes to accomplish—its character to establish—its fame or its fortune to secure; and all this in periods so remote that imagination can scarcely follow back the thread of time till it brings us to the era of this bituminous satire on mortality—this imperishable nonentity, which has resisted the corroding hand of time, and remained unchanged while thousands—tens of thousands of generations have risen, and flourished, and perished, and been forgotten. Alas! how would the pious people of Egypt, who took such extraordinary pains to resist the havoc of decomposition, and to preserve the frail tenement of clay for the return of its former inhabitant—whose love of perpetuity was such, that not content with those enduring monuments which have been the wonder of succeeding ages, they attempted to render imperishable the very hands that raised them—how would they have been scandalized could they, with prophetic eye, have pierced the obscurity of the future, and contemplated the hallowed remains of their dead—bartered for gold, and carried far from the banks of the sacred Nile—ground into dust, and mingled with disgusting drugs, to be swallowed by some credulous hypochondriac? or their coffins violated in the presence of hundreds of gazing spectators—

the envelopes, on which the air had never breathed since the hour in which the embalmers completed their work of preservation, rudely torn from their limbs, and portions of their flesh handed about, to be felt, and smelt, and tasted, by curious antiquaries! Such were our contemplations when we beheld a portion of this same venerable mummy, which had just been boiled, handed round the circle of cognoscenti who occupied the first rank—first in place, and first in science. The specimen had been taken from what had once been the “nether bulk” of the Egyptian; and we observed that the morsel was viewed with intense interest by a noble Lord who, though he has but recently become a member of the government, must always be of *great weight* in the state, and a certain part of whose dimensions presented a striking contrast to those of the withered thing that lay beside him.

The disposal of the dead, as practised in different ages and by various nations, is a subject of great interest, in connexion with the history of the human race. Embalming is undoubtedly one of the most ancient practices with regard to the dead which is recorded. We are told that “Joseph commanded his servants, the physicians, to embalm his father; and the physicians embalmed Israel.” And again, the whole history of the Egyptian mummies demonstrates their great antiquity. The object of the Egyptians seems to have been to preserve the body in as perfect a state as possible, in the belief that it was again to become the receptacle of the soul; and such was their regard for the remains of their friends, that they used frequently to keep them in their dwellings, to be the subjects of their pious meditations, or, if Lucian be correct, sometimes the companions of their gayer hours. Of the manner in which

the process of embalming was conducted, little more is known to this day than may be found in the pages of Herodotus, who gives a very precise description of it; although some doubt will naturally attach to the accuracy of the names given to some of the antiseptic ingredients. He says of the Egyptians—

“With respect to their funerals and ceremonies of mourning, whenever a man of any importance dies, the females of his family, disfiguring their heads and faces with dirt, leave the corpse in the house, and run publicly about, accompanied by their female relations, with their garments in disorder, their breasts exposed, and beating themselves severely: the men on their parts do the same, after which the body is carried to the embalmers.

“There are certain persons appointed by law to the exercise of this profession. When a dead body is brought to them, they exhibit to the friends of the deceased different models highly finished in wood. The most perfect of these, they say, resembles one whom I do not think it religious to name in such a matter; the second is of less price, and inferior in point of execution; another is still more mean: they then inquire after which model the deceased shall be represented: when the price is determined, the relations retire, and the embalmers thus proceed:—In the most perfect specimens of their art, they draw the brain through the nostrils, partly with a piece of crooked iron, and partly by the infusion of drugs; they then with an Ethiopian stone make an incision in the side, through which they extract the intestines; these they cleanse thoroughly, washing them with palm-wine, and afterwards covering them with pounded aromatics: they then fill the body with powder of pure myrrh, cassia, and other perfumes, except frankincense. Having sown up the body, it is covered with nitre for the space of seventy days, which time they may not exceed; at the end of this period it is washed, closely wrapped in bandages of cotton, dipped in a gum, which the Egyptians use as glue: it is then returned to the relations, who enclose the body in a case of wood, made to resemble a human figure, and place it against the wall in the repository of

their dead. The above is the most costly mode of embalming.

“They who wish to be less expensive adopt the following method:—They neither draw out the intestines, nor make any incision in the dead body, but inject an unguent made from the cedar; after taking proper means to secure the injected oil within the body, it is covered with nitre for the time above specified: on the last day they withdraw the liquor before introduced, which brings with it all the bowels and intestines; the nitre eats away the flesh, and the skin and bones only remain: the body is returned in this state, and no further care taken concerning it.

“There is a third mode of embalming, appropriated to the poor. A particular kind of ablation is made to pass through the body, which is afterwards left in nitre for the above seventy days, and then returned.

“The wives of men of rank, and such females as have been distinguished by their beauty or importance, are not immediately on their decease delivered to the embalmers: they are usually kept for three or four days, which is done to prevent any indecency being offered to their persons.”

When the embalming was conducted according to the most careful and expensive method, the degree of perfection in which the body remained is represented as having been very extraordinary. Diodorus, who, as well as Herodotus, travelled in Egypt, informs us that many of the Egyptians who keep the dead bodies of their ancestors in magnificent houses, see the real features of those who died many ages before they themselves were born, and take as much pleasure in gazing on the countenance of each as if they still lived among them. One of the parts of the description of Herodotus most difficult to comprehend, is how the brain could be extracted through the nostrils, without such incision as must entirely have disfigured the parts. Yet it seems probable that this was really one of the methods practised; and, in a mummy dissected by Dr. Granville, there was some imperfection about the nose which seemed to shew

that it had been partially injured during the process. In the case alluded to, the brain and membranes had been removed; but in the instance we have above described, the membranes were perfect, though not a vestige of brain remained. How could this have been accomplished? Is it likely, that in a mummy obviously made in the less expensive way of immersion, in boiling pitch, or some analogous fluid, any extraordinary degree of pains would have been taken as to the mode of extracting the brain? Is it not possible that the brain, in the progress of decomposition, had become a liquid mass, and transuded through the various foramina of the skull, leaving its membranes in their natural situations. The part of the inner case, opposite the head and neck, as well as the envelope at this point, seemed stained, as if some such transudation had occurred;—but we offer it merely as a conjecture. However, that certain parts of the body become perfectly fluid during decomposition, under favourable circumstances, and that they may remain in that state for a great length of time, is rendered probable by what has been found on opening some old graves. Thus, in 1789, the coffin of Edward IV. who died in 1482, was opened. The skeleton was entire; but what we have chiefly to remark is, that the coffin contained a liquid, which covered the bottom of it to some depth. Analysis did not lead to the detection of any saline, or other matters, which it was likely might have been used for antiseptic purposes, and it was conjectured that the fluid was formed of the debris of the body, the dissipation of which had been prevented by the exclusion of the air.

A more important inquiry, however, than that concerning the fate of the brain itself, relates to the form of the cranium which contains it. Blumenbach had been led to conjecture, from

some analogical reasoning, that the Egyptians were of the Ethiopian race; Cuvier, on the contrary, after carefully examining the skulls of numerous mummies, came to the conclusion that they were of Caucasian origin, and the interesting observations made by Dr. Granville, with regard to the dimensions both of the head and of the pelvis in a female mummy, which he dissected, strongly support the doctrine of the latter. Dr. Granville holds the relative dimensions of the pelvis to be quite as decisive of such a question as those of the head; and in his case the measurement of the pelvis, as well as of the body generally, corresponded almost entirely with that of the *Venus de Medicis*. Indeed, in Dr. Granville's paper*, he shows throughout considerable ingenuity in maintaining his opinions, and has adduced satisfactory evidence of some curious facts. For example, he seems to have ascertained that bees' wax was an ingredient in the bituminous mixture used for embalming; and it is remarkable that the word *mum* (from which mummy seems to be derived) signifies "wax." He has also rendered it probable that nitrate of potass, carbonate, sulphate, and muriate of soda, were used in the process; at least he states that these salts were discovered in a kind of crystalline efflorescence which formed on his mummy, and which was removed with a fine brush in sufficient quantity to be subjected to chemical analysis. So far all seems satisfactory; but we can scarcely restrain a smile when the Doctor goes on to tell us that the deceased lady, who, he conjectures, may, perhaps, have been a contemporary of Sosistratus, was between fifty and fifty-five years of age at the time of her death—that she had born several children (he does not specify the number)—that the disease which proved fatal was an ovarian dropsy, though, at the time of her death, she also la-

* Philosophical Transactions, 1825.

boured under that troublesome affection of the scalp—*porrigo decalvans*! The thinning of the bones of the pelvis affords some plausibility to the first; the appearance of the parietes of the abdomen, which seem to have been enlarged, may be admitted as a shadow in proof of the second; and something like a cyst which was found in the region of one of the ovaries, rescues the alleged cause of death from utter improbability. But the *porrigo decalvans*!—a cutaneous disease of the scalp, producing even in life so little visible change of the skin—discoverable after three thousand and some odd hundred years—amid bitumen and bees' wax, and endless bandages—this is a refinement in diagnosis worthy of Alibert, whom we remember to have seen affect to distinguish some eruptions by the smell, and send round a patient to the pupils, saying to them—*mais sentez, messieurs—sentez*.

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SOIRÉE EXTRAORDINARY AT THE LONDON UNIVERSITY.

To the Editor of the Medical Gazette.
University Hotel, Dec. 13.

SIR,

I HAVE the honour to be acquainted with one of the professors of the London University; and my friend—for so he allows me to call him—invited me to the conversazione last Saturday. To what I can attribute this distinction, save to his partiality, I am unable to guess; but being determined to do no discredit to his good opinion, I looked over the last few numbers of the Gazette, and some other periodicals, to provide myself with scientific conversation; and sending for a cab, that I might be genteel, I drove to Gower-Street at the appointed time. Perhaps, sir, you are not aware—for I cannot otherwise account for no mention having been made of it in your pages—that a new scientific institution has lately sprung up within the walls of the London University, in which the promoters of useful knowledge, instead of having to wait for the tedious and uncertain rewards which flow from a reluctant public, receive an hebdomadal recompence, suited to their

merits, in that feast of reason—the mutual interchange of thought; while every Saturday, such of the younger part of the scientific community—I mean the pupils—as have behaved with due diligence and propriety during the week, have awarded to them, as a prize, an introduction to the evening meeting, where they are treated with tea and coffee, bread and butter, and instructive conversation. The beneficial tendency of this arrangement is too obvious to require that I should enlarge upon it: suffice it to say, that the ingenuous youth is thus encouraged and rewarded by receiving food for the body as well as the mind; while his manners and tastes derive a polish and refinement from the influence of that charm which the society of gentlemen—a term so pre-eminently characteristic of some of the professors—never fails to exert over the minds of the young. As these meetings are extremely select, and the professors tenacious of their increasing reputation of their school, they are naturally very particular as to whom they admit. I of course expected that I should see none but persons whose career their pupils might contemplate as worthy of imitation, and pointing out the surest paths to honourable distinction, while their names might serve to the friends of their youthful companions as a guarantee of the respect which the professors paid to public opinion, their attention to decorum, and their jealousy of character. Nor was I disappointed in these my expectations; for while I was contemplating the skeleton of the noble animal which was lately slain at Exeter Change, and preparing to say something appropriate on the cruelty of its death, my attention was arrested by some bustle at the door, when I beheld introduced, by one of the professors, that virtuous monitor of youth, and epitome of the moral graces—the Editor of the Lancet.

It would have been impossible, I am sure you will admit, sir, for the Professors to have taken any method of giving a high and distinguishing tone to the character of their meetings, so unambiguous, so comprehensive, so expressive, as this. The entré, as you may suppose, excited a lively sensation; to borrow a figure from that mirror of eloquence, Lord Ellenborough, had a wild elephant been ushered in by a tame one, the surprise of those who were unprepared could not have been more overwhelming than

when the learned Professor was delivered of his charge at the door of the museum. For a moment I had some misgivings as to the result,—I had my doubts whether some of the other Professors who were present would have greatness of mind enough to forget the castigations which their distinguished guest had so often bestowed upon them; but these doubts were soon dispelled as injurious to their magnanimity, and as underrating the freedom from prejudice—the meekness—the pliability of their natures. Truly, sir, it was a most edifying spectacle to witness; nothing can produce effervescence in minds saturated with science! Where indignation might have been feared, nothing was seen but eagerness to testify to the admiring pupils the estimation in which the visitor was held, and they who had most writhed under his lash, like docile curs, were most forward to fawn, and lick the hand that chastened them. With what complacent gratification did I look upon this interesting scene! Here, I exclaimed, may we witness the triumph of liberal principles! how much superior this to the conduct of many private practitioners, who have opened their houses avowedly to receive all the respectable members of their profession, and who yet have uniformly made one invidious exception! how much more true dignity is there in this than in the conduct of the College of Physicians, whose invitations were extended with so free a hand, and yet who made one marked exclusion; nor was any Fellow—not even he who made him the medium through which he betrayed the trust of his Censorship, bold enough to introduce the obnoxious individual. Such are the effects of prejudice—though I have heard this spoken of as evincing the force of public opinion, and the influence of a name. For shame, that in an age like this, it should have been left for any of the Professors of the London University to shew that all must yield to the public good;—that no scientific body can by possibility have a right to exclude any one from their society—that respect for character is mere cant, and that honour is a mockery; that no habits of insolent abuse—of dark insinuation—of open attack—of sly perversion—or of direct falsehood;—that not the atrocity of systematic libel—no nor the triple infamy of a

conviction thrice recorded, are sufficient reasons in the eyes of liberal men for discountenancing a writer who has it in his power once a week to treat them as he has treated others: nay, to treat themselves again as he has treated them before. There is magnanimity in the act, for it shews the extent of their forgiveness; there is independence in the act, for it shews their disregard of the world's opinion; there is humility in the act, for it shews their lowliness in receiving the contemned of others as a fit associate for themselves; there is wisdom in the act, for what may they not hope for from the gratitude of one to whom such flattering attention comes with all the freshness and charm of novelty? No one introduces another to such a meeting who does not look upon his friend as fit to associate with its members as well as with himself; nor does any one shew courtesy to the guest who does not admit his right to join in his society. By the selection made on such occasions, we may fairly judge of the measure by which men estimate themselves, and consequently in this respect ought to be estimated by others. It is in this light that the circumstance I have related becomes of so much importance; and the example set by more than one of the Professors of the London University, on this occasion, affords a great moral lesson to the pupils, which I feel assured all interested in their welfare will view with the liveliest satisfaction.

Thus we have at least one bright example of emancipation from the trammels of prejudice and envy; nay, if report speak true, a nobler and more substantial proof of liberality is intended. The vacant chair of medical jurisprudence rumour assigns to the disappointed candidate for the coronership. If this be so, it will free the University at once from every difficulty, remove all doubt as to its future fate, and hand down the names of the Council to posterity as the most unprejudiced and disinterested, as they are already reckoned among the most judicious, of men.

I have the honour to be, sir,

Your most obedient,
and most humble servant,

A FRIEND TO LIBERAL
PRINCIPLES.

MEDICO-CHIRURGICAL SOCIETY.

Tuesday, Nov. 30th.

THE meetings of the society were resumed this evening, when a very interesting paper on dropsy of the amnion was read by Dr. Lee. As we intend to publish this paper in full next week, we shall not enter upon any account of it at present.

Tuesday, Dec. 14.

Pathology of Epilepsy.

A paper, by Dr. John Sims, entitled, *Notes on the Researches of J. and C. Wenzel on Epilepsy*, was read by the Secretary. It appears that the views entertained by these distinguished pathologists have been incorrectly represented by various English writers, by whom the profession in this country have been generally misled. In 1810 a posthumous work of J. Wenzel, on the pituitary gland of epileptic patients, was published by his brother; and on the following year a French translation appeared, in which *cerevet* was used throughout wherever *hirnanhang* was employed in the original. This seems to have led Dr. Cooke into error, who likewise has represented the Wenzels as having always found the *cerebellum* decreased, whereas, in their work, that part is seldom mentioned at all, and never as having undergone any change of structure.

The following are the appearances described by the German pathologists, as found in twenty cases of epileptic individuals:—A peculiar thinness of the sphenoid bone; variations in the position, shape, &c. of the clynoïd apophyses, producing some change in the size and form of the *sella turcica*.—The pineal gland was frequently changed in colour; in ten cases it was pale, and in all softened; but it was in the pituitary gland that the principal changes were perceived. Among the morbid phenomena which it presented were an uneven, furrowed, or muscular appearance of the surface—sometimes a kind of excavation—changes of colour, as red, yellow, and brown, of various shades; in some cases it was softer than natural, in others it was indurated; in seven cases it was much enlarged, with lymph between the lobes. Internally there existed, in ten cases, a yellow solid matter at the point of union between the two lobes; in five cases there was a viscid semifluid lymph in the above situation.

In some cases the infundibulum was

preternaturally firm, occasionally with some appearance of lymph.

Caries of the bones at the base of the skull, exostosis, and other morbid changes of the osseous structure, were met with in several instances, with some effusion about the dura mater or arachnoid. In fifteen cases out of the twenty the cerebrum and cerebellum were perfectly sound.

Dr. Sims added that a few weeks ago he had an opportunity of examining the body of a patient who had died of epilepsy. The spinous process of the os frontis and crista Galli of the ethmoid bone were unusually prominent and sharp, as were the four clynoïd processes of the sphenoid. The anterior and posterior processes of this last seemed to approach so as to narrow the cavity of the *sella turcica*. The pituitary gland was small, and appeared to be altered in its texture; but at this time the author of the paper was not aware of the exact nature of the Wenzels' doctrines, so that he did not examine it so minutely as he might otherwise have done.

The above paper was followed by one from the pen of Dr. Rigby, but which we shall give in our next number.

Reporting.

WHILE Dr. Sims's paper was being read, Mr. Hutchison rose and stated that a person behind him was taking notes of the paper, and that he must beg to know whether they were intended for publication, as, if so, the proceeding was against the laws of the Society. The reporter then stated that he was employed for the *Lancet*; and he attempted to address the meeting, notwithstanding the intimation of the President that he could not be suffered to do so. He was then forbidden to take notes, and was permitted to remain, on promising not to do so. After the papers had been read, Mr. Plumbe rose, and addressed the meeting in behalf of suffering reports to be taken by persons employed for that purpose. There is, however, a standing law of the Society against it, and the proceeding on his part was irregular for two reasons: first, that no such business can legally be brought forward at an ordinary meeting; and, secondly, because Mr. Plumbe, not having paid his subscription for several years, had forfeited his right to speak on any subject, or even to be present.

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE,

DELIVERED BY DR. ELLIOTSON,

December 6, 1830.

Summary of Cases admitted—Vomiting not dependent on Inflammation—Efficacy of Hydrocyanic Acid—Chronic Gastritis, treated with Antiphlogistics—Doctrines of Broussais—Practice of the late Dr. James Curry—Pericarditis, and Disease of the Heart.

I DID not finish, gentlemen, in the last lecture, all the cases that had been presented during the preceding week: five remained unspoken of.

One of these was a case of slight fever in the female ward, treated in the usual way, and with the usual success. She was admitted on the 15th of November, and presented on the 28th.

There was also among the women presented a case of vomiting, which appeared to arise merely from morbid irritability; and it may be very well contrasted with a case of a different description, presented on the same day, in the same ward, and in which different treatment was successful—a very interesting case of vomiting from inflammation.

The first patient, Eliz. New, was admitted on the 11th November, æt. 21. She said that she had been ill five months, and it appeared that she had vomited every thing she took for fourteen days. She had been in a state of amenorrhœa for two months; she complained of pain across the epigastrium, and across the whole of the abdomen. Her tongue shewed no feverishness; there was no thirst, no heat in the stomach, no heat in the throat; neither was there tenderness on pressure on any part of the abdomen, nor was the pulse accelerated. Under these circumstances, I could not suppose that the case was one of inflammation; for although there was pain across the abdomen, yet that pain was not increased on pressure, and therefore it appeared to be of a spasmodic character.

On this account I conceived that I could stop the vomiting and cure her by soothing medicines—medicines calculated to lessen the morbid irritability, which was independent of inflammation. Among these, certainly that which operates much more upon the stomach than upon any other part—that which answers best in a great number of cases, is the hydrocyanic acid. She took hydrocyanic acid in doses of two or three minims, which is equal to four or five drops, three times a-day, and no other medicine was given, nor was she put on low diet: her vomiting was stopped, and she went out on the 25th perfectly well.

You will find that it is of the greatest importance to make this distinction. When you have an affection of the stomach, you should ascertain, in the first place, whether

there is inflammation or not; for if there be inflammation, the hydrocyanic acid would not cure it; the case must be treated like inflammation of any other part of the body. But if you can find no inflammation whatever, and you find no cause for vomiting in any other parts of the body, (it will often arise from an irritation in the intestines, the kidney, the womb, and ten thousand distant causes) then the hydrocyanic acid will relieve the vomiting far more, I am satisfied, than any other medicine. I have not found it relieve the pain of rheumatism or cancer, or pain situated in any of the distant parts of the body, or pain in the intestines; it is of no use in colic, though it is said by some to be of occasional service in neuralgia. As an anodyne I have not found it of the least use in general, except in cases of pain of the stomach. It has the properties of an anodyne on the stomach particularly, and has a tendency to lessen the morbid irritability which produces vomiting. It is no exaggeration when I state that I have frequently seen vomiting, which has lasted for months, cease on the exhibition of the first dose of this medicine. Frequently, however, in cases of spasmodic pain of the stomach, you will find that the first dose, or the second, or even one week's exhibition, will not answer the desired end; you will be much more struck with its use in lessening vomiting than in lessening pain in the stomach. But you will find it of no service unless you make a distinction between the existence of inflammation, and the influence of distant causes, on the one hand, and mere morbid irritability of the stomach itself upon the other.

Hydrocyanic acid is a medicine that is exceedingly powerful, and you cannot give it in the same dose when the stomach is empty as when it is full. When the stomach is full, the difference of a drop may cause a great difference in the effects. Supposing you are giving three drops, three times a-day after meals, it certainly will not be right to give more than one or two drops upon an empty stomach. To avoid any confusion which may arise, it is best always to give it after meals, otherwise you must vary the doses at different times of the day. You cannot, in general, give it on an empty stomach more than once in the day, because when food has been once taken, the second meal comes usually before the stomach is as empty as it was before. On this account I make it a rule to give it after breakfast, in the afternoon, and the last thing at night. As it is so powerful, you cannot tell before hand the dose that will be borne, and you should begin with a small quantity, such as you know can hardly disagree with the stomach. I begin with one minim, though you may begin with two, and many persons do so, but it is safer to begin with one. I give one minim three times a-day, diluted with water, or aromatic water; and in the course of a-day, if no unpleasant effect be produced,

I increase the dose to two minims, and the third or fourth day I give three minims, and so on till it produces the effect I desire, or some inconvenience arises. Although it will relieve the vomiting arising from mere morbid irritability, it will, from its irritating properties, likewise cause it. If you give an over dose, it may produce extreme nausea, extreme vomiting, and perhaps gastrodynia—pain in the stomach. It is common for many narcotics to be stimulating as well as sedative, and this is the case with this medicine; and medicines act with different power upon different people; and therefore you should give it in small doses at first, if you wish to make it act favourably. Tobacco will arrest the action of the heart, and cause complete prostration of strength, and yet it excites sneezing, and one person is affected by a quantity not noticed by another. In general people bear from two to four minims, but you not unfrequently meet with individuals with whom five minims do not disagree, and now and then you may safely increase the dose to six or eight, or even more.

You will find this of great use for another purpose—for making other medicines sit upon the stomach, which would otherwise disagree with it. You may lessen the natural irritability of the stomach so much, that iodine, colchicum, and medicines of that active description, will frequently sit upon it, whereas they would not unless ten minutes before you administered them you gave a dose of hydrocyanic acid. These medicines may remain upon the stomach if you unite prussic acid with them, but it answers better for this purpose if given ten minutes before, so as to come into full operation before the acrid medicines are taken.

This case was only one of hundreds of others which I have seen of dyspeptic vomiting ceasing from prussic acid, and not only dyspeptic vomiting, but gastrodynia—the pain that occurs in the stomach from spasm. In organic affections of the stomach, you will frequently find it answer better than any other medicine; if there be cancer of the stomach, scirrhus, pylorus, or whatever the organic disease may be, you will often find the hydrocyanic acid allay the vomiting and pain much more than any thing else. Now this woman was not purged, no aperients were given, none of the treatment for inflammation was adopted, and she was not even put on moderate or particular diet.

For the purpose of contrast I will speak of a case that was some time in the hospital—one of chronic gastritis. Mary Harrison was admitted on the 7th October, æt. 50: she had been ill two months. The symptoms were constant and great pain under the region of the heart, which was exceedingly increased on pressure. It appeared to be situated in the splenic half of the stomach. There was constant nausea, and a great discharge of fluid from the throat, and she had

spit up two or three times dark clots, apparently of blood, and such clots had frequently passed from the rectum. In the book it is said she feels full, and is nauseated as soon as she eats: there is constant heat of the epigastrium, constant heat up the throat, and thirst: a bad taste in the mouth, no appetite, great heat of the whole body, especially at night; cheeks flushed, scalding pain in the stomach as soon as she takes wine or any other kind of stimulant. These were the symptoms, and nothing could more decidedly show an inflammation of the stomach. Here was in the first place pain in the region of the stomach; this pain was constant, was increased on pressure and on taking any sort of stimuli. There was also great nausea, great heat in the stomach, and this sense of heat amounted to scalding, and was increased by wine or any other kind of stimulant. Then there was excessive secretion going on there, for her mouth was constantly filled with fluid; she frequently discharged a large quantity of thin liquid, and now and then even blood came away, which is a common thing from any affection of a mucous membrane; not that there was any extent of it—it was only a few dark clots. Besides these local symptoms of inflammation, there were general symptoms. There was great heat, and the face was flushed, she was very thirsty, and her pulse was 90. Besides these general and local symptoms of inflammation there was a disturbed state of the stomach, anorexia, and nausea as soon as she took her food, and vomiting of these dark clots which came to her throat. You know that one of the sets of symptoms in inflammation is that arising from disturbed function of the affected organ. She was also emaciated, and her bowels were so costive that frequently she had not a stool for a whole week. Costiveness is not an uncommon symptom in any inflammation, and it very frequently occurs where the stomach is inflamed.

Now this is a sort of case which you will see almost every day. You will have people come, saying that they have indigestion, and upon inquiry you will find there is tenderness on pressure upon the stomach, and pain increased as soon as they take wine or brandy, or any thing of that description, and notwithstanding that, they go on eating and drinking, and taking stimulants.

I found it impossible to say whether this woman was labouring under simply chronic inflammation of the stomach, or whether there was united with it organic disease. It was impossible for me to say whether there might not be scirrhus in some parts of the stomach—whether there might not be some fungous growth beginning, as well as an inflammation around it—or whether there might not also be an ulcer in the stomach. Unless you can feel induration—unless there is repeated hæmorrhage, and a peculiar sallow

hue of the complexion—unless you can feel enlargement, it is quite impossible in these cases to say with any certainty, that there is any thing more than common inflammation.

The treatment, however, is to be that simply of chronic inflammation. If there be organic disease, you will not cure it, and, if not shown distinctly to exist, you must proceed upon the hope that there is nothing more than chronic inflammation. If there be organic disease, there may be much inflammation of course around it, and though you will not lessen the organic disease by the remedies for inflammation, you will lessen the amount of suffering. There are so many cases of disease thought to be organic, which are nothing more than chronic inflammation, that in every instance, unless there be evidence to the contrary, we are to act upon the hope that there is no organic disease, and by so acting we may cure a considerable number. This woman was in a state of great emaciation, and therefore, I confess, I feared the worst,—that there was probably something more than chronic gastritis. I set to work, however, upon the presumption that there was mere inflammation. She took not a grain of medicine during the whole time she was in the hospital. Twelve leeches were applied to that part of the epigastrium where there was the greatest pain—the left side, and these were repeated every day; and, as soon as they came off, a poultice was applied, in order that as much blood as possible might be obtained. Besides, a poultice was regularly applied twice a day, so that she had the benefit of a constant local warm bath over the stomach. On account, however, of her extreme constipation, it was necessary to attend to the state of her bowels; such a state could not be healthy, and would certainly exert an influence upon the state of the stomach, and therefore she had a daily clyster. Had I given her medicine by the mouth, it would have irritated the stomach, have increased the inflammation, and might have failed in opening her bowels, in consequence of its being sent up again, and not allowed by the organ to pass the pylorus. She had a clyster every day, twelve leeches were applied, and she was allowed nothing but diluents; milk she could not take; of barley water she grew tired, and she was restricted at last to weak beef tea, and of that she took but little. By these means, without any deviation whatever—without an addition being made to them on the one hand, or there being any cessation of them upon the other—though she was only admitted on the 7th October, so debilitated that she could scarcely turn in bed, and lay principally on her back, she was discharged perfectly well on the 25th of November, having stayed in the house some time in a state of

convalescence—about seven weeks in the whole. The leeches were applied till they seemed to be exhausting her—till the tenderness and the heat were diminished, and then they were discontinued. They were applied daily from the 7th of October to the 19th of that month, and from that time they were applied every other day till the 26th of October, when they were no further required. The clysters were diminished in the same proportion—that is to say, for two or three weeks they were employed every day, and after that period every other day, and then once or twice a week, till the bowels came into a perfectly regular state. Towards the end of October she was so freed from inflammatory symptoms, but yet so debilitated and so hungry, that I allowed her meat. She took one mutton chop from the 26th of October every other day; and from that time she was able to sit up, and gradually recovered, and went away expressing the greatest gratitude, saying that her life had been saved. I do not know whether that was the case, but her disease was cured under the means employed.

I believe that till of late the nature of these cases was not sufficiently attended to. When persons vomited, and complained of a pain in the stomach, a great number of practitioners gave aromatics and stimulants of various kinds. In France this was undoubtedly the general case until the time of Broussais, a celebrated physician now practising there. The treatment consisted in what they called anti-spasmodics. Sometimes not only cases of inflammation of the stomach, but of the head and various parts of the abdomen, and sometimes of the chest, were thought diseases of debility, and to require stimulants and nourishment, and anti-spasmodics. Stimulants and narcotics of all kinds were given.

But although Broussais must have rendered incalculable benefit to his countrymen, I do not think that we are indebted to him for a change of practice in this country; for it had been previously introduced. I know that when I was a student it was the custom to attend to these things, though perhaps not to such an extent as at the present day. The state of the abdomen was examined, in all abdominal affections, to see whether there was inflammation or not; and it was the custom to treat all inflammatory affections of the abdomen by antiphlogistic treatment when I learned the practical part of my profession. Perhaps I was particularly fortunate, and enjoyed an advantage over a great many of my cotemporaries, in studying under the practice of Dr. James Curry, at Guy's Hospital. He had been a practitioner in India; he had practised in the navy, and had seen a great deal of the necessity of looking out for inflammation, and treating it by antiphlogistic means general and local. It was his custom in almost

every case to turn down the bed-clothes, or put his hand under them, and press the abdomen, especially in cases of fever, but in a large number of diseases also. I soon saw that he was right; and wherever the patient complained of pain he took away blood locally. He had a particular idea respecting the liver, and therefore he applied cupping-glasses continually to the right hypochondrium and epigastrium, where the pain was generally seated. There can be no doubt that many of his opinions respecting the seat of inflammation were absurd; he ascribed all to the liver, and seldom thought of inflammation of the stomach and intestines. He ascribed almost all the affections of the abdomen to the liver. His fault consisted in localizing too much, and in speaking, not of the abdomen at large, but of the liver; and there can be no doubt that he gave mercury more extensively than was necessary. I believe that at that time it was not so much the custom generally to attend to the inflammatory state of the abdomen in fever and other diseases as was the custom with him; but those who saw his practice, my fellow students and myself, got into the way of attending to it; and I have no doubt that the number who attended his lectures (which, of course, was far more than attended his practice) are throughout this country practising successfully through the good instruction they derived from him. We saw his errors, but we learned great good; and to me, therefore, when I see what the French do, and how their opinions are changed in the practice they adopt, there is nothing new. It was perfectly familiar to me, and had been for many years; and, in fact, I never read any thing of Broussais till very lately; and when he is right—and he is unquestionably as extravagant in his way as Dr. Curry was in his—I cannot say that what he advances is new to me, I mean the importance of searching out for abdominal inflammation and treating it as inflammation; at the same time, that it is not new to me, is owing to my instruction from Dr. Curry. The French have an idea that we are not conversant at all with the frequency of abdominal inflammation; they do not imagine that so many diseases are treated in this country by taking away blood locally and generally. I know that a great many books are written in England as well as in France, containing erroneous notions of practice; I know that many persons have taken the lead in practice in England who have been but bad practitioners, because extent of practice does not show a man's knowledge or skill, but merely his assiduity and knowledge of mankind; but notwithstanding that, I am satisfied that in this country there has been for many years a large number of practitioners, especially those who studied at Guy's Hospital, who have been pursuing their avocations in this

rational, sound, and, I must add, very successful way. The French read many books published in this country, which contain erroneous ideas, and hence they are led to fancy that our practice is universally erroneous—that we have no idea of inflammation occurring so frequently as they know to be the case; but notwithstanding that, I am quite satisfied that in no country is the frequent occurrence of inflammation recognised more than in England, nor are diseases treated on a more antiphlogistic plan. Although still there may be many practitioners who do not practise in this sound rational way, particularly those who say they are of the old school (and, after a time, we are all of the old school, and are displaced by those who come after us and know more), I must think that we do consider diseases in this country to be inflammatory as much as is done in any other, and we do adopt antiphlogistic treatment to as proper an extent.

To return to the case of the woman: had the inflammation been seated any where besides the stomach, I should have assisted the leeches by the application of medicines; but as that was the part to which all the medicines must have been applied, I trusted altogether to the leeches, lest I should irritate the organ. For what I know to the contrary, calomel might have passed through the stomach without irritating it; but still it might not. I trusted that the inflammation of the stomach, chronic as it was, would give way to the leeches, the clysters, and low diet; and I did not think it right to run the risk of disturbing their operation by any medicine. It is possible that by calomel I might have got her mouth tender, and the inflammation would have been subdued much sooner; but still, whether it would have locally irritated the stomach by its presence, is a point on which I cannot speak with certainty. The case was one of great interest, from the severity with which it shewed itself when she first came to the hospital—on account of the gradual decline of the symptoms, the perseverance in one line of treatment, and the perfect recovery of the woman before she left us.

It is common for patients to say that they feel a great sinking—that they must have food; and then their friends call upon them, and for the purpose of looking amiable, whisper in their ear, “never mind what the doctor says; you will be better if you take a glass of wine: come, one glass can't hurt you:” and continually have I been sent for, after having taken the utmost trouble in the case, and brought it nearly to a conclusion, merely from the circumstance of a person having taken a glass or two of wine, and then brought back all the irritation of the stomach; and even if they neglect the strict rules of diet too soon—if they merely eat

meat like other people—it will often bring them back to the state in which they were at first. These cases are so common, and it is such a common practice for persons to take full diet and aromatic medicines in these cases, that I am very anxious that the present case should make an impression upon you.

There was likewise a case which I should have spoken of last week of considerable interest, and I regret to say, which proved fatal. It is the first case among those, admitted during the present season, in which a *post mortem* examination has been permitted. There have been between seventy and eighty patients admitted under my care since the 1st October, and four deaths have occurred. In two cases from hæmorrhage that had taken place before the patients came to the hospital, and in one from apoplexy; but none of these were examined in the hospital—though one of them was inspected by a gentleman at the patient's house.

The case to which I am now about to allude was one of inflammation of the pericardium and disease of the heart. It occurred in Stephen William Simpson, admitted Nov. 16th, æt. 17: he had been ill a fortnight of acute pericarditis. This boy was in the hospital a year before in a similar state of violent pericarditis, and then he was cured, or at least was cured of the inflammation itself; and he got so much better, that he would not stay in the house, but resolved to return to work at his trade of a tailor. The symptoms which he had at that time were violent pain in the region of the heart, darting to the clavicle and shoulder, and back to the scapula; extreme tenderness on pressure over the heart, violent palpitation, and all the symptoms of pyrexia. The treatment then consisted in abundant local bleeding and the exhibition of mercury, and he very soon went out—went out before I wished him, for his heart was then beating too much, and it beat with a bellows sound.

This inflammation of the pericardium had come on originally after an attack of rheumatism, and it occurs by far the most frequently when a patient is labouring or has laboured under rheumatism, and also far most frequently in young persons.

It appeared from his account, that in the present instance he had been ill a fortnight, which was a very considerable time for pericarditis to go on. He was labouring under dyspnoea and violent and extensive palpitation of the heart, so that you might see it beat at almost any distance as he lay. It beat 160 in a minute, and its impulse and sound were perceived very extensively over the chest. He had violent pain in the region of the heart, and a very strong bellows sound, which took place with the pulse at the wrist, when the heart struck the side.

The account he gave was, that he was a tailor, and while engaged at his business a fortnight ago, was suddenly seized with a violent pain and palpitation of the heart; that he went and got bled, by which he was much relieved for a day or two; he then got wet through, and the palpitation soon returned, with the pain, which now reached the clavicle, and darted back to the scapula. The next morning he had shivering, and a cough came on, and he was bled and blistered. The pulse was often irregular, very small, and at times hardly distinguishable, which is a common occurrence in pericarditis. There was great and extensive dullness of sound on percussion over the cardiac region. There is a dullness on percussion if there be effusion into the pericardium, for the matter is liquid instead of air in that region of the chest; but the dull sound did not arise from that circumstance in this instance. There was also great cough without expectoration, which lasted sometimes for five minutes; and the respiration was difficult, except when he was sitting up or lying on his back: there was increased dyspnoea at night. In addition to these symptoms of pericarditis, there was anasarca and ascites; his abdomen was distended, and his legs and thighs were of great size. The common symptoms of pericarditis are pain in the region of the heart, darting to the clavicle and back to the scapula, and tenderness in the pericardium, if you press the cartilages of the ribs down upon it. These symptoms, together with rapidity of the pulse, palpitation, difficulty of breathing, and a dry cough, made up the account he gave. The peculiar seat of the pain and tenderness, the palpitation and pyrexia, shew almost in every case the nature of the disease. But there was a great deal more in this case. There was, first, the dull sound to a great extent in the region of the heart. Now he said he had been perfectly well till within a fortnight, and therefore, if he spoke the truth, it was improbable that the dull sound arose from the heart being greatly enlarged; but there must have been something sudden, some effusion of fluid, especially when the anasarca was taken into consideration. There was another circumstance, which was, that the heart beat to a great extent, as though it were enlarged, and very forcibly, as though it were hypertrophied. It likewise beat loud; but there was a difficulty here, because a bellows sound occurred, and that was the only sound heard from the ventricles; and the auricles also beat loud and clear. I confess, if I had not been told any thing of the case, but simply trusted to my own observation, I should have at once declared this was a case not merely of pericarditis, but also of diseased heart, of hypertrophy and dilatation of the left ventricle, with a difficulty of egress from it, for never were the symptoms of these affec-

tions more strongly marked; but the patient assured me that he had been perfectly well till within a fortnight, when he was suddenly seized with pain and palpitation, and as it was impossible for me to deny it, I only ventured to put down pericarditis. He was bled in the arm, and well cupped, and mercurialized, and was a great deal better, excepting that the heart still gave the same sound—signs of hypertrophy, and dilatation, and obstruction, as before, when, on taking some food one day, he suddenly expired: he was not taking digitalis, or the sudden event might have been ascribed to that medicine.

On opening the body (I am sorry to say that I cannot show you the heart) the heart presented great disease. The left ventricle was amazingly dilated, perhaps to four times its natural size; and its thickness was retained, so that there was a great addition of substance—great hypertrophy. There was adhesion nearly all over the pericardium, so that the cavity was nearly destroyed by the lymph which had been thrown out, part of which appeared to be recent, and part ancient, produced in the attacks which he suffered last year. The inflammation had been so intense that there was not only this adhesion, or rather cohesion of the pericardium, but also adhesions externally; the pleura in the immediate neighbourhood had suffered, and bands were seen between the lungs and pericardium, and lungs and costal pleura. The marks of previous pericarditis were, therefore, decided enough, and the pericarditis appeared to have been cured; but the difficulty was, how the heart could have been enlarged to this great extent, and especially retaining its natural thickness, if he had been perfectly well a fortnight before. If a part may be stretched and dilated rapidly, still it cannot suffer this but by extenuation, and cannot rapidly experience such a deposition as will maintain its thickness during dilatation. I do not pretend to solve the difficulty, but know that I have opened persons where the heart was not dilated to half the extent which it was in this instance, and yet they had suffered dreadfully for many months. In addition to which, it must be borne in mind that he was a tailor, and therefore had no occasion for active pursuits; and appeared to have a very strong mind, capable of suffering much without complaining. Having great doubts from the various features of his case, when he assured me that he had had no difficulty in breathing and no palpitation, I asked whether he had observed *any thing* unusual about the heart, to which he did reply yes—he had had the bellows sound ever since he was in the hospital last year. He was acquainted with the term, because, when in the hospital before, the bellows sound occurred, and though of course he could not put his ear to his chest, yet he heard the sound when he was in bed, and he said that it had never left

him. Such being the case, I have no doubt that the heart had been dilated nearly the whole time he had been out of the hospital, because there was no reason for the bellows sound but the dilatation.

You are aware that the bellows sound appears to arise from a certain degree of impediment to the progress of the blood in the heart or the large vessels. In this case there was no diminution of the mouth of the aorta; but the bellows sound was heard the loudest in the left half of the cardiac region, and at the moment of the heart's stroke and of the pulse at the wrist; and therefore it arose in the transit of the blood from the left ventricle; but the opening not being diseased—not being at all narrowed—the impediment arose from the great dilatation of the ventricle behind the opening. Each opening bears a certain natural proportion to the cavity, and allows the escape of the blood without any noise; but if the proportion of the opening be lessened, then the particular noise of the bellows sound is heard. Now this may take place by the opening being absolutely diminished itself, the cavity remaining the same; or, again, the opening being perfectly natural, but the cavity being increased, so that the naturally sized opening will be too small for the free escape of the blood from the morbidly large cavity. That was the case in this instance:—the opening was not diminished, but the cavity was increased. Frequently you will find that both are increased—that the cavity and the opening are dilated together, so that there is then no bellows sound; but if the opening continue of its natural dimensions, and the cavity be greatly increased, then you will hear the bellows sound. In this case the bellows sound was very loud, and there was nothing to produce it but the dilatation of the ventricle, compared with which the opening was felt by the fingers to be of extreme smallness.

Now as this bellows sound existed ever since last year, and had grown so violent that he heard it always himself before this last attack, I cannot but conclude that the dilatation had existed all the time—there was no other cause for the bellows sound—the bellows sound did exist all that time—it was impossible to believe that this dilatation took place in a fortnight. The right auricle is often dilated just before death, from the great impediment to the circulation in the lungs; but in that case the part becomes thinner than usual. In this case, although the heart was greatly dilated, it was not thinner than usual, and therefore the dilatation must have been a slow process—fresh substance must have been deposited in the walls of the ventricle, to make up for the dilatation. If the dilatation had been merely the result of over-distention, then the part would have been thinner; but instead of that it remained its natu-

ral thickness, and therefore the dilatation must have been attended by additional substance, to keep up the original thickness. This was a case of hypertrophy, because with the dilatation there was the natural thickness; for if there had been no additional substance, no hypertrophy, the part would have been thinner than usual. You must remember this circumstance, that although the heart may not be thicker than usual, there may be hypertrophy; its cavity may be greatly dilated, and its thickness be unimpaired.

I doubt the truth of this boy's account very much. You know the error which I might have been led into in a case spoken of last week, of colic from lead. There was violent pain down the spine, and in the extremities, and yet the patient stoutly denied that he had been in the way of lead, till at last it came out that he had been painting his ship. Now with respect to this boy, there was this one fact allowed by him, that he had had the bellows sound a year, and therefore, under the particular circumstances of the heart discovered post mortem, the heart must have been dilated all the time; but with respect to his being in sound health, suffering no palpitation, and no difficulty of breathing, I doubt the truth of his statement very much. If I had cross-questioned him very minutely, I should no doubt have found that he had suffered, but that he had borne his sufferings quietly, and been above talking of his complaints, because he was young and had good spirits; and, indeed, I had been struck with the firmness and nobleness of his mind.

With respect to the cause of sudden death, I imagine it arose from a sudden loss of the power of the heart. You are aware that if any part of the body become much distended—much dilated, it loses its power. When the bladder has been excessively distended by urine it will not empty itself, and retention of urine is the consequence, and you must press upon the bladder to cause its evacuation. In this patient, the left ventricle of the heart was found completely filled with coagulated blood, perfectly black; and it was therefore certain that the left ventricle did not act at the moment of death. In general you find the left ventricle quite empty, or containing little blood; the accumulation is upon the right side of the heart. A difficulty of course occurs in the transmission of the blood through the lungs, and therefore in the right side you have accumulation. As long as this—the ultimatum moriens—can transmit its blood through the lungs, the left ventricle receives blood, and sends it through the aorta, whence it finds its way into the system at large. There was as much blood on the right side of the heart as usual, but the left ventricle was full of it, and I therefore conclude that the left ventricle had suddenly ceased

to act—had suddenly lost its power, and could not chase away its blood.

With respect to the cases admitted last week, I shall not have time to speak of them; but I will enumerate them, and you will find them of an interesting description.

Among the women were four patients: one with schirrus of the womb—a very intense case of schirrus; one of a diseased ovary, where there was a solid tumor and dropsy to a great extent: one of acute rheumatism; and a case of fever.

Among the men seven patients were admitted: one case of palsy of the wrists from lead; one of palsy of the lower extremities from working in a wet ditch; a case of bronchitis and dropsy; one of diabetes: one of St. Vitus's dance; one of a cutaneous disease, ichthyosis; and one of palsy of the tongue, one eyelid, one eye, and one half of the face, with a degree of aberration of the mind.

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

BATH HOSPITAL.

To the Editor of the London Medical Gazette.

SIR,

FEW productions are calculated to afford greater satisfaction than the Clinical Lectures of Dr. Elliotson. They possess so much talent, so much tact, and so much good sense, that your readers, judging from myself, look forward with no little curiosity to each forthcoming lucubration. In the last lecture is a case of Inflammatory Dropsy of more than common interest, and having a short time since met with one in some respects similar, I am induced to trouble you with it. In so doing my great aim will be brevity, wishing merely to bring forward plain facts, and the name of the writer is affixed to the communication, because authenticated cases are, *ceteris paribus*, of more value than those which are anonymous.

I am, sir, your obedient servant,
C. H. HARDY, M.D.

Case of Inflammatory Dropsy.

Isaac Dobson, ten years of age, the child of a poor labourer on Combe Down, a high and exposed situation, applied as an outpatient at the Bath United Hospital Friday, Oct. 1, 1830. His face, eyelids, abdomen, thighs, legs, scrotum, &c. were enormously distended with fluid, and he had been gradually increasing in size for some weeks. At this time he was literally swollen from head to foot, and the abdomen was so large that it was impossible to ascertain whether or not he was suffering from organic mischief. Respiration was much impeded. Pulse

quick, of small power. Tongue white. Urine scanty, and high-coloured. Bowels open. No rest. The swellings commenced in the face.

He took mercurials, purgatives, and diuretics up to the 15th of the month without any effect on the disease, the size being greater, and the urine less. Indeed scarcely any was passed. Under these circumstances he was taken into the house, bled immediately to ten ounces, ordered three grains of calomel, with five of antimonial powder, at night, and a purgative draught in the morning.

On the 16th he was found to have rested well, to be suffering less from oppression, and the size of the face was considerably diminished. The blood appeared covered with a milky serum, the crassamentum adhering to the sides and bottom of the vessel. Size 33 inches. Urine 2 ounces, thickly coagulating. One loose, copious evacuation. Veins on abdomen dark coloured, large, and prominent.

Repetantur pilulæ, h. s.
Mistur. Potass. Acetat.

17.—But little swelling of face. Body $32\frac{1}{2}$ inches. Urine 10 ounces, coagulating less. Bowels well open.

The pills and mixture were repeated and continued without change till the 5th of November, when the swellings were reduced, and the boy without complaint. He had an occasional black draught, and for a day or two the diuretic was by mistake omitted, as it would seem, disadvantageously. The gums after a few days were slightly tender, but never to any great inconvenience, and he had never pytalism. On the 8th he omitted all medicine, and was allowed meat, which he took with much appetite and relish, and on the 12th he was discharged quite well.

One or two remarks present themselves, sufficiently obvious, but which should not be passed over altogether.

1. Neither mercurials, purgatives, or diuretics, had any effect previous to the blood-letting.

2. They had ample effect almost immediately afterwards,

3. No weakness or distress took place after the calomel, repeated every night from Oct. 15 to Nov. 5 (21 days) up to which time he had taken more than a drachm of the submuriate, with only slight tenderness of the gums.

4. The aid of the diuretic mixture (acetate of potash with sp. æther. nitr.) was powerful, the size increasing, and the urine diminishing, when it was accidentally omitted.

5. At the end of this course the boy, so far from being weakened, was strong, cheerful, of good appetite and spirits, and bore the appearance of robust health.

6. His case seems to have been dropsy occurring in a habit decidedly inflammatory, manifested less by sharpness of pulse or pe-

itoneal tenderness than by his general appearance and the state of the tongue.

Table of Date, Size, and Urine.

Date.	Size.	Urine.
	Inches.	Ounces.
Oct. 16	33	20
	17 32 $\frac{1}{2}$	10
	18 32	36
	19 32	16
	20 30 $\frac{3}{4}$	36
	21 31	12
	22 30 $\frac{1}{4}$	20
	23 30	28
	24 29 $\frac{1}{2}$	40
	25 29	46
	26 27 $\frac{1}{2}$	56
	27 25	62
	28 23 $\frac{3}{4}$	64
	29 23 $\frac{1}{2}$	48
Nov. 1	30 23	46
	31 23	34
	2 22	34
	3 22 $\frac{1}{2}$	36
	4 22	16
	5 22	46
	6 22	36
	7 22	24
	8 22	34
	9 22	23
	10 22	24
	22	24

BRIGHTON HOSPITAL.

To the Editor of the London Medical Gazette.

SIR,

IF the following cases meet your approval, the insertion of them in your useful journal will greatly oblige your obedient servant,

GORDON GWYNNE.

Nov. 13, 1830.

Case in which Fracture of the Cervix Femoris was produced in attempting to reduce a Dislocation of the Hip, and followed by bony union.

George Flaxman, aged 14, strumous diathesis, and spare habit, admitted Jan. 1, in consequence of an injury of the shoulder joint, and partial paralysis of the lower extremities; the former arising from a blow on the part, while as to the latter no obvious cause can be assigned. The accident occurred a week before admission, when there was a large abscess collected about the shoulder, and extending for some distance down the arm; it created great constitutional irritation, and an opening was made into it, when about a pint of pus made its escape. A large quantity of matter conti-

nued to be secreted, which found exit from various sinuses in the neighbourhood of the joint. He was ordered tonics and good diet; and the discharge decreasing, in about six weeks his health improved. He was then ordered to use the warm bath. One morning the nurse, whilst making his bed, observed a tumor situated above and behind the left hip, which, on being examined, was found to be caused by a dislocation of the femur upon the dorsum ilii. The limb was about three inches shorter than the sound one, the knee and foot were turned inwards, and the head of the bone could be distinctly felt resting upon the dorsum ilii. The patient being questioned as to the cause of the accident, said he had met with it about a month before, whilst getting into the bath, from a fall on his knee; but as it had occasioned little pain, he had not mentioned it. A trial at reduction was proposed on the 27th of April, and the following plan adopted: he was placed in a bath at 100°, increased to 110°, and remained there till he felt faint; he was then taken out, wrapped in a blanket, and placed upon a bed; tartarised antimony was given till it produced nausea; a linen roller was placed above the knee, over which the strap was applied for fixing the pullics, a coarse towel being placed in the groin. We commenced by making gentle extension, till the patient complained of pain, when we ceased; after the lapse of a few minutes we again tightened the pullics, and gently rotated the limb; these means were tried for about three quarters of an hour, when a sudden snap was distinctly heard, as though the head of the bone had slipped into its socket; but on examination, it was still found resting upon the dorsum ilii, a fracture of the cervix femoris being produced. The limb remained much shorter than the other; and on rotating it a crepitus was heard, as though one portion of bone grated against another. The patient was put to bed, and some Træ. Opii given him. Next morning there was a good deal of tension about the limb, and he complained of pain, for which some leeches were applied. All febrile symptoms soon disappeared, and after the expiration of six weeks he was ordered passive motion of the limb, by which he acquired great power of moving the leg, and was able in a short time, with the assistance of a stick, to walk tolerably well.—He left the hospital on the 22d September, since which time I have had an opportunity of seeing him; the leg had got much stronger, and he could bear the weight of the body on it without any inconvenience.

In this case, in the reduction of the femur, an injury of a serious nature was produced by the mechanical force used, viz. a fracture of the cervix. It will be remembered the dislocation had existed for four weeks, without its being known; during which time in-

flammation must have existed, by which the bone must have been agglutinated to the surrounding parts, so that when extension was used, it could not be raised from its attachments. The union that exists no doubt is osseous, because there is no rotatory motion of the limb whatever, and he is able to bear the weight of the body upon it without inconvenience; whereas, if the union were ligamentous, there would be a rotatory action of the limb, and it would give great inconvenience in resting the body on it. This case was seen by most of the surgeons in Brighton, as well as by an eminent practitioner in London, who one and all agreed there was fracture of the cervix femoris, and that osseous union had taken place.

Case of Traumatic Tetanus treated with Carbomate of Iron—Fatal.

James Coppard, aged 70, admitted on the 24th October ult., in consequence of a severe contusion of the right hand, with fracture of three of the metacarpal bones. The accident happened three days previous to admission, his hand being placed on the wheel of a cart, and coming in contact with a wall. The mischief is confined to the back of the hand, nearly the whole of which is occupied by a large slough; the extensor tendons of the index and ring fingers are exposed, and inflammation of an erysipelatous character extends up the arm as far as the shoulder joint. Pulse quick; tongue coated; great constitutional disturbance.

Leeches were applied to the arm, and afterwards an evaporating lotion; the wound to be dressed with the lin. terebinth., and a catap. lini; some calomel and opium, with saline mixture, every four hours.

25th.—Inflammation greatly subsided, but the arm is œdematous; febrile symptoms abated; hand free from pain; pulse 80, soft; bowels constipated; tongue moist.

An enema, with the ol. terebinth., was ordered; pills and mixture to be continued.

26th.—Bowels freely open; excretions dark; slept well; pulse soft; tongue moist; wound discharges freely; slough isolated; mouth affected.

To discontinue the calomel, and the pulv. antim. to be substituted; some quinine was prescribed three times a day, and his other remedies continued. Porter Biss.

27th.—Symptoms much the same as yesterday; a portion of the eschar came away; granulations underneath it healthy; discharge increases; arm still continues œdematous; appetite improves; bowels sluggish.

To have the turpentine enema and some leeches to the fingers, as they appear tense and inflamed. C. alia.

31st.—Continued to improve until this morning, when he complained of stiffness of the lower jaw, and said it was with difficulty he could open his mouth; his tongue was unnaturally red; pulse hard and wiry; skin hot; bowels constipated.

A blister was applied on each side of the lower jaw, and to the cervical vertebra; the enema was repeated, and his pills, with the addition of the calomel, continued.

Nov. 1st.—This morning his mouth is more firmly closed; no sleep during the night; complains of pain and tightness over the epigastrium. These symptoms increased towards the afternoon, when opisthotonos came on; abdominal muscles in a state of great rigidity, and drawn towards the spine; perspires profusely.

℞ss. of the subcarbonate of iron was given every three hours, in treacle; likewise ℞j. of the iron in some beef tea, in the form of an enema.

2d.—All symptoms worse, and the disease apparently at its greatest height; abdomen very tense; spasms frequent; convulsive contractions of the muscles of the extremities; breathing hurried; mouth completely closed; inability to swallow; paroxysms more frequent; wound looks healthy; he is evidently sinking.

Died at six p.m. I examined the body next day, and found the mucous membrane of the larynx, and through the whole course of the alimentary canal, in an inflamed condition, and in some parts ulcerated.

Observations.—Here the immediate cause of death was an unforeseen circumstance; and perhaps the result of the case might have been more favourable if, on the first instance, the limb, or the injured part, had been removed; but on his admission the state of the limb would not allow of this being done: and if it had, the injury was not sufficiently great to justify its removal. On the 31st, seven days after the accident, tetanic symptoms commenced; counter-irritants were applied to the parts affected, with a view of exciting an increase of action, thereby superseding the morbid one. The subcarbonate of iron, used by Dr. Elliotson with such success in similar cases, was tried; he says its good effects will not be shown before it has been administered two or three days; but before that time the poor fellow's sufferings were put an end to.

NORTHAMPTON GENERAL HOSPITAL.

To the Editor of the London Medical Gazette,
Sir,

Should you deem the following case at all interesting, I beg you will give it a place in your highly interesting Journal.—I am, sir,

Your obedient servant,

J. W. WISE.

Nov. 28th, 1820.

Chloride of Soda in malignant Ulceration.

Sarah Wright, aged 25, of a good constitution, was admitted November 15th into the General Hospital, Northampton, with an extensive malignant ulcer of the tongue. The person states that it first commenced, about a month since, with a small pimple on the left side, which rapidly increased from that period to its present size, occupying the whole of the anterior portion of that organ. The surface of the ulcer is very irregular, fluid granulations appearing in some parts, and in others deep and sphacelating cavities. She has had generally good health, is unmarried, and has always catemania regular. During the previous fortnight has been attended by a medical man, from whom, she states, she had a variety of medicines, but without experiencing the slightest benefit. She was immediately ordered some opening medicines and a gargle.

R Hydr. Submur. gr. v. statim sumend.

Solut. Chlorid. Sodæ, ℞iij.

Aqua Puræ, qj. fiat gargarisma frequentius in die utend.

16th.—The ulcer looks much cleaner, and her bowels have been freely open. She complains of a dull pain being constantly present, and saliva issues from her mouth resembling salivation.

17th.—The sloughs have begun to separate, and the surface of the sore assumes a different character; bowels open; pulse 65.

Cont. gargarisma.

Cap. Carb. Ferri, ℞j. ter quotid.

19th.—Since last report the sloughs have entirely separated, excepting on the right side, and the granulations appear healthy.

Cont. garg. et pulv.

22d.—A small slough still remains on the right side, but the tongue is beginning to assume its natural appearance.

Cont. gargarisma. Omit. alia.

26th.—The appearance of the tongue is now nearly natural, and the person can articulate with freedom.

28th.—Discharged from the hospital cured.

The above case is a good illustration of the efficacy of the chloride of soda in malignant ulcers, and its superiority over the various applications which are so frequently resorted to in the routine of practice, but unfortunately too often without the least avail.

NOTICES.

Dr. Hope's paper was received too late to be inserted in the present Number, according to his request.

Dr. Lee's and Mr. Keate's in our next.

ERRATUM.

The author of the Case of Poisoning, in our last, was Dr. Bigsby—not Dr. Bigsley.

W. WILSON, Printer, 57, Skinner-Street, London.

THE
LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 25, 1830.

OBSERVATIONS

ON THE

PATHOLOGY AND TREATMENT OF
DROPSY OF THE AMNION.

BY ROBERT LEE, M.D. F.R.S.

Physician to the British Lying-In Hospital.

(Read before the Medical and Chirurgical
Society, November 9, 1830.)

THE preternatural distention of the uterus, by an excessive secretion of liquor amnii, in the latter months of gestation, forms one of the most distressing complications of the gravid state, and has not unfrequently given rise to dangerous errors in practice.

In the works of the earlier writers on the diseases of pregnancy, and particularly in those of Mauriceau and Lamotte, we find cases recorded of dropsy of the uterus. Similar cases are to be met with in the writings of Baudeloeque and Gardien, and these authors are the first who seem to have been acquainted with the general fact, that the fluid in this affection is contained within the cavity of the amnion.

It was not, however, until the publication of M. Mercier's essay on this subject, in 1809, that any attempt was made to determine the true pathology of the disease by an accurate examination of the contents of the gravid uterus. His paper, which is entitled, "*Observatio de Acute Amniosis, Hydrope, aut amniosis inflammatione, quæ evasit in magnam aquarum Colluviem, unde abor-*

tus*, contains the histories of three cases of acute dropsy of the amnion; and from the appearances observed in the foetal membranes, he has deduced the general inference that the inordinate secretion invariably depends on inflammation of the amnion.

The first case is that of a woman, aged 30, five months pregnant, who, after being fatigued and over-heated, drank a quantity of cold water; was in consequence seized with pains in the region of the pubis and loins, cold shivering, nausea, anxiety, and cough. The pain in the lower part of the abdomen increased, and the hypogastrium became tense and swollen. On the 16th day, the abdomen being greatly enlarged, labour pains came on, and ten pints of liquor amnii were discharged, and afterwards two fœtuses, which scarcely shewed any signs of life, were expelled. The fœtal surface of the amnion was partially coated with false membrane, and the amnion itself crowded with blood-vessels, and of a rose red colour.

In the second case the infliction of an injury during pregnancy was soon followed by vomiting and lancinating pains in the hypogastric region, and pyrexia. On the 10th day after the accident, the pains having been relieved by bleeding, the abdomen began to acquire an unusual size. On the 43d day the abdomen had become enormously swollen, and the respiration was laborious. The membranes were soon after punctured with a long needle, and as the water flowed, the tumefaction gradually sub-

* *Observatio de Acute Amniosis, Hydrope, aut Amniosis inflammatione quæ evasit in magnam Aquarum Colluviem, unde Abortus. Auctore F. Mercier Apud Anversum. Journal General de Medicine, Tom. 43 and 45.*

sided. Labour pains came on the following day, and two dead children were expelled. In this case about a quarter of the foetal surface of the amnion was inflamed, being of a deep red colour, and double the natural thickness.

The third case resembled the two preceding in all essential circumstances, and the appearances observed in the amnion were nearly similar.

In 1817, Scarpa published a memoir on ascites complicated with pregnancy, but it contains no observations relating to the nature of dropsy of the amnion, nor to the symptoms by which it can be distinguished from effusion of fluid into the general cavity of the abdomen*.

In the following communication, I propose briefly to describe the morbid appearances which I have observed in the foetus and its appendages, combined with this affection; to point out the signs by which it may be recognised with the greatest certainty; and the best mode of affording relief where the urgency of the symptoms demands our interference.

CASE I.—Dropsy of the Amnion, with Ascites of the Foetus, and Malformation of the Lungs.

3d Sept. 1827.—Madame Bassi, æt. 30, in the seventh and a half month of pregnancy. During the last six weeks she has been suffering constant severe pain of the abdomen, which has been rapidly enlarging during the last fourteen days, and is now greatly distended. The lower extremities are œdematous, the respiration is impeded, and there is urgent thirst and pyrexia. The movements of the infant have been unusually languid; blood-letting, cathartics, and diuretics, were employed without relief; the dyspnoea, and swelling of the abdomen, continued to increase until the 10th, when uterine contractions came on, and a quantity of liquor amnii escaped, which the midwife represented as sufficient to fill all the empty vessels in the house. A foetus was afterwards expelled, which shewed no signs of life.

Its abdomen contained 1½ of serum, which was examined by Dr. Prout, and found to be albuminous, and closely resembling that of dropsy. The mesenteric glands were enlarged. The liver was of the natural size, but of a dark

lead colour, and of the consistence of coagulated blood, its natural structure being apparently destroyed. The spleen was larger and softer than natural. The peritoneum was highly vascular, and in several parts ecchymosed.

The pericardium and general cavities of the thorax contained a considerable quantity of serous fluid. The lungs on the right side were healthy, and the left superior lobe; but the inferior had undergone a singular change in its structure, being converted into a mass of vesicles like hydatids, containing fluid, and enveloped by the pleura, which was very vascular.

The placenta and membranes were not examined.

CASE II.—Dropsy of the Amnion, with Hydrocephalic state of the Foetus.

An unmarried lady, about 35 years of age, had been under the care of a physician for five months, who considering the swelling of abdomen and other symptoms with which she was affected to depend on common ascites, had exhibited mercurials, which had twice produced salivation, and digitalis, and other diuretics to a great extent.

On the 9th of March, 1828, I was called to see her, in consequence of her being attacked with pains, recurring at intervals like labour pains, and a confession she had made that the enlargement of abdomen might be the consequence of pregnancy. The belly was so enormously distended that she could not turn from the right side, on which she lay, to the left, without some assistance in moving the fluctuating mass. So distinct was the undulation of the fluid in the abdomen, that I also concluded it must have been accumulated in the sac of the peritoneum. As she had suspicion of being pregnant, though she declared she had never felt the movements of the child, I was induced to examine the state of the os uteri, before recommending an operation to relieve the urgency of the symptoms. The orifice of the uterus was considerably dilated, the edges thin, and the membranes protruding; the head of the child presented, and the balotement was remarkably distinct, as was the fluctuation of the fluid in the uterus.

Dr. Ley, of Half Moon-street, saw the patient with me the following morning, and approved of the proposal to rupture the membranes, which being

* Sulla Gravidanza Susseguita da Ascite. Memoria del Cavaliere Antonio Scarpa, &c., Treviso, 1817.

done, sixteen pints of liquor amnii escaped, and the abdomen immediately became flaccid; uterine contractions soon came on, and, after continuing many hours without any progress, in consequence of the hydrocephalic state of the child's head, the perforator was employed, and two pints of a dark-coloured offensive fluid were discharged from the brain. The delivery was speedily completed with the crotchet; but great tenderness of the hypogastrium soon followed, with suppression of the lochia and prostration of strength, and she sunk from peritoneal inflammation on the third day after its invasion.

The usual appearances of peritoneal inflammation presented themselves on dissection, and a large fibro-cartilaginous tumor was found embedded in the muscular substance of the uterus, where the placenta had been attached.

In this case the placenta was about half its natural size, and remarkably soft in its texture. With the exception of the hydrocephalic state of the head, no diseased appearance was discovered in the child.

CASE III.—*Dropsy of the Amnion, with Ascites in the Fœtus.*

Mrs. Lewis, æt. 20, was delivered June 27th, 1828, of a still-born child, in the eighth month of utero-gestation. The quantity of liquor amnii which escaped during the labour was excessive.

The abdomen of the fœtus contained 1½ss. of a straw-coloured serum. The peritoneum was highly vascular. The liver was of the usual size, but of unnatural density. By the patient's account, her first child was also born prematurely, in a putrid state, and she attributed both these accidents to a syphilitic taint she had contracted from her husband.

CASE IV.—*Dropsy of the Amnion, with a Morbid Alteration of Structure in the Placenta.*

31st Aug. 1823.—Catharine Nethy, æt. 37, residing at No. 415, Strand.

About six weeks ago, while in the seventh month of pregnancy, she began to experience a sense of constant dull pain in the region of the uterus, and soon after perceived the abdomen to enlarge with unusual rapidity. The lower extremities became œdematous, the urine was secreted in sparing quantity, and the respiration difficult when

in the recumbent position. The movements of the child were observed to be remarkably languid.

All these symptoms having become more severe, and the abdomen greatly enlarged, labour pains commenced last night, and about five quarts liquor amnii escaped, and soon after a fœtus, which appeared to have been deprived of life for some time.

With Mr. Curtis, of Dorking, I examined the fœtus and its involucri with the greatest care, but could discover no appearance of vessels in the amnion, or lymph effused on its fœtal surface. The chorion was also in a perfectly healthy condition; the placenta was of the natural size, but its whole mass was unusually soft in texture, and a considerable portion of it was converted into a dark coloured substance, very similar to what is observed in portions of the lungs of the adult, in pulmonary apoplexy.

CASE V.—*Dropsy of the Amnion complicated with Ascites and Anasarca in the Mother; the Fœtus and its Involucri healthy.*

Mrs. Bryant, æt. thirty-four, residing at No. 3, New Church Court, Strand; 30th August, 1828. Though she is only in the seventh month of pregnancy, the abdomen is larger than it commonly is at the full period of gestation. The lower extremities are œdematous; she suffers much from constant severe pain in the hypogastrium, dyspnœa, and cough; the countenance is pale and anxious; the pulse quick; there is urgent thirst, with scanty secretion of urine.

These symptoms have been experienced during the last three months; but the unusual enlargement of abdomen was not perceived till the beginning of the sixth month of pregnancy, since which time it has been rapidly increasing. From the period of quickening the movements of the child have been remarkably feeble.

An obscure fluctuation could be perceived by percussion of the abdomen. On examining per vaginam, the os uteri was closed, but the cervix uteri was found obliterated, as in the ninth month of pregnancy, and the presence of a large quantity of fluid could be detected in the uterus. The distended uterus occupied nearly the whole brim of the pelvis: and not only was the undulation

of the fluid it contained rendered sensible by the impulse communicated by the finger in the vagina, but the ballotement of the child was also exceedingly distinct.

Blood-letting, diuretics, &c., were employed without relief. The difficulty of respiration became greatly aggravated, the abdomen still more distended, and the urine secreted in smaller quantity during the succeeding two weeks, and on the 21st of October, when the dyspnœa became so alarming as to threaten suffocation, I ruptured the membranes, though there was no sign of approaching labour, and ten pints of liquor amnii were discharged.

On the following day uterine contractions came on, and a living child was born, which has continued to live and enjoy perfect health.

The placenta and foetal membranes, though minutely examined, presented no trace of disease.

The mother continued to suffer from dyspnœa, and anasarca of the lower extremities for several weeks, but ultimately recovered. An obscure fluctuation was perceptible in the abdomen for some time after delivery.

CASE VI.—*Dropsy of the Amnion, with Ascites in the Fœtus, and Morbid Alteration of Structure in the Placenta.*

A lady about 30 years of age was delivered of a premature child in the seventh and a half month, which shewed feeble signs of life. The liquor amnii amounted to about six pints, and the unusual swelling of abdomen immediately subsided.

The peritoneal sac of the fœtus contained ζ iv. of serum; and the whole cellular membrane of the body was distended with fluid to the utmost extent. The pleura covering the lungs on both sides was studded with small tubercles; and on the surface of the liver and spleen the same appearance was distinctly perceptible.

The placenta was fully three times the common size; its vascular structure appeared to be destroyed, and its place occupied by a soft yellow-coloured adipose matter.

In five of the cases, the histories of which have now been related, there existed with dropsy of the amnion, some malformed or diseased condition of the fœtus or its involucri, which rendered it incapable of supporting life subse-

quent to birth; and the same circumstance has been observed in most of the cases which have been recorded by the authors to whom I have alluded. In two only of the preceding cases was the formation of an excessive quantity of liquor amnii, accompanied with inflammatory and dropsical symptoms in the mother; and in none did the amnion, where an opportunity occurred for making an examination, exhibit those morbid appearances produced by inflammation which M. Mercia has described, and which led him to infer, that inflammation of the amnion is the essential cause of the disease.

When unconnected with a dropsical diathesis in the mother, I am disposed to consider it merely as one of the numerous diseases of the fœtus in utero, which arise independently of any constitutional disorder in the parents, and with the causes of which we are wholly unacquainted.

The diagnosis of dropsy of the amnion is most difficult in the simple form of the disease, where the effusion has taken place to a great extent, and when complicated with ascites. In both these cases, fluctuation more or less distinct can be perceived on percussion of the abdomen, but we can obtain from this sign no positive information to enable us to determine whether the fluid be contained in the cavity of the peritoneum or amnion, or in both these membranes.

In the simple form of dropsy of the amnion, where the quantity of fluid is not excessively great, the fluctuation is obscure, deep seated, or wholly imperceptible. The presence or absence of fluctuation is, therefore, no certain test of the existence of the disease, and the only mode of arriving at a correct diagnosis, both in its simple and complicated forms, is by instituting an examination per vaginam. By this proceeding we shall not only be able to ascertain the changes in the uterus consequent on impregnation, but the accumulation of a preternatural quantity of fluid in the membranes of the ovium. This latter circumstance is known by the enlargement of the body of the uterus, by the state of its cervix, which is almost entirely obliterated, by the ballottement of the fœtus, and by the sense of fluctuation in the vagina on percussion of the abdomen.

In ascites complicated with pregnan-

cy, Scarpa has observed that the symptoms are entirely different from those of hydrops amniosis. The regular form of the fundus, and body of the pregnant uterus, he states, is not evident to the touch in these cases, from the enormous distention and prominence of the hypochondria, arising from the great quantity of fluid interposed between the fundus and posterior part of the uterus and abdominal viscera. The urine is scanty and lacteritious, and the thirst is constant. The abdomen upon percussion presents a fluctuation obscure in the hypogastric region and in the flanks, but sufficiently sensible and distinct in the hypochondria, and strong and vibratory in the left hypochondrium, between the edge of the rectus muscle and the margin of the false ribs.

These symptoms, with the previous history of the patient, may afford us in doubtful cases some assistance in the diagnosis, but our principal dependence, as I have before said, must be placed on the information acquired by a careful examination of the state of the cervix and body of the uterus.

Having arrived at a correct diagnosis, the treatment of dropsy of the amnion becomes simple. Our only aim is to relieve the urgency of the symptoms occasioned by the over-distention of the abdominal cavity, and the only feasible mode of giving this relief, in my opinion, is by puncturing the membranes and evacuating the superabundant liquor amnii. In the second and fifth cases I have related, this operation was had recourse to with success, and in the fifth the life of the child was preserved. In all the other cases the spontaneous rupture of the membranes was followed by alleviation of the symptoms and the birth of a child, rendered by disease incapable of supporting life—a farther proof that the evacuation of the liquor amnii is attended with beneficial consequences. The artificial rupture of the membranes, if the operation be carefully performed, is not more dangerous than the spontaneous rupture, and if the ease and safety of the mother can be ensured, we ought not to be induced to delay its performance by apprehension for the life of the child, since, from its diseased state, in the greater number of instances, it will be still-born.

The only difficulty that can arise respecting the treatment is in cases of

dropsy of the amnion complicated with ascites. Even here I should recommend the evacuation of the liquor amnii, as the best remedial measure that can be had recourse to, since it relieves the leading symptoms produced by the pressure of the excess of fluid in the peritoneum and amnion on the neighbouring organs, which are, in fact, the only symptoms we have to counteract, and is followed by the expulsion of the contents of the uterus. After delivery, the effusion into the peritoneal cavity, if it depend on utero-gestation, will spontaneously disappear; if it be the effect of hepatic, or other visceral disease, it may be treated by appropriate remedies.

In the memoir of Scarpa, to which I have already alluded, a case of acute dropsy of the amnion with ascites is related, in which the operation of paracentesis abdominis was performed under the false ribs of the left side, and the fluid contained in the sac of the peritoneum evacuated, after which labour came on, and 16 pints of fluid and two dead fœtuses, were expelled. The patient recovered, and Scarpa has inferred from the result of this and other cases, that where ascites is combined with pregnancy, the aid of surgery is required, or the evacuation of the fluid by the operation of paracentesis abdominis.

Scarpa not only dreads no evil consequence from this operation in pregnancy, but supposes the gravid uterus itself may be safely punctured, and supports this opinion by cases related in the writings of Camper, Bonn, Langis, and Reiscard. We cannot, however, be justified in performing either of these operations, which the experience of others has proved to be so hazardous, if, by the simple means now recommended, relief can be obtained. "It therefore seems necessary," as Dr. Denman has observed, "to establish this general rule, that no woman at a time of life, or under circumstances which in the most distant manner subject her to a suspicion of pregnancy, should ever be tapped, or otherwise treated for a dropsy, till by an examination per vaginam, or by waiting a due time, we are convinced that she is not pregnant, even though she may have before undergone the operation*."

* See Denman's Introduction to Midwifery, svo p. 218.

REFUTATION
OF THE
VARIOUS OBJECTIONS

TO
DR. HOPE'S THEORY OF THE ACTION
OF THE HEART.

BY DR. HOPE.

A CHAMPION has stepped forward in front of Dr. Corrigan, who, wielding a weapon above his strength, fearfully slashes his neighbours, his protégé, and, most of all, himself, without otherwise inconveniencing his antagonists than by stunning them with the noise of his vociferations.

Dr. Haycraft, at the outset of his second essay (*Gazette*, Dec. 11th, 1830), candidly avows that he is incompetent, from personal knowledge and experience, to apply physiological principles to the explanation of diseases of the heart. He is right—and proves it; for, on turning to a category of his *practical remarks* and diagnostic conclusions* (addressed, indeed, to the *inexperienced* of his readers), the most inexperienced will not deny that he understands perhaps less even than he supposes of the class of diseases in question.

It is rather surprising that, after such an avowal, he should have the courage to engage in a controversy; that he should undertake to confute me, on grounds of experience, by my own cases; and, still more, that he should speak in the oracular tone with which the reader is acquainted.

As I have a duty to his inexperienced readers, I am called upon, though I obey the call with extreme reluctance, to place his opinions in their true light; and as I deem ridiculous, which he has so unsparingly employed, to be inadmissible in treating of scientific subjects, I shall throw aside the weapons of that description with which he has so richly supplied me, and use nothing but plain argument.

Dr. Haycraft has entered the lists professedly and avowedly as the champion of Dr. Corrigan. Why, then, has he offered a series of conclusions †, to

most of which he has attached Dr. Corrigan's name, but which are essentially different from those of Dr. Corrigan?—and why has he done this without apprising the reader, and without an acknowledgment to Dr. Corrigan, for having modified—totally altered, his opinions?

I shall first present the conclusions of Dr. Haycraft, then contrast them with those of Dr. Corrigan, and finally point out the reasons for the change.

The conclusions of Dr. Haycraft are as follow:—

“1st. The cause of the impulse against the chest, is the rush of blood into the ventricle.—CORRIGAN.

“2dly. The cause of both sounds at the chest is the ‘frottement,’ or more correctly, the check given to the motion of the blood in the ventricles.—PIGEAUX.

“3dly. The chief cause of the propulsion of the heart against the ribs, is the muscular action of the ventricle during the diastole, whereby the axis of the heart is lengthened.—HALLER.

“4thly. The first sound of the heart is coincident with the sound of the (*extreme*) diastole of the ventricle.—CORRIGAN.

“5thly. The second sound is coincident with the extreme systole of the ventricle.—CORRIGAN.

“6thly. The pulse intervenes between the two sounds.—CORRIGAN.

“7thly. The propulsion of the heart is synchronous, in the strict sense of the word, with the diastole of the ventricle.”

Now, No. 1 is an imperfect version of Dr. Corrigan's, which runs thus:

“The impulse is caused, not by the contraction of the ventricles, but by that of the auricles, and is dependent on the force with which the auricles send their blood into the ventricles.” (*Conclusion 5*, *Med. Gazette*, July 3, 1830, page 526.)

After, however, adopting No. 1, Dr. Haycraft forthwith contradicts himself, and abandons his protégé, Dr. Corrigan, in No. 3; for now he says that the beat against the ribs is occasioned, not by the rush of blood into the ventricle, but by “the muscular action of the ventricle during the diastole, whereby the axis of the heart is lengthened.”

Dr. Haycraft is fully aware of this contradiction, and, to meet it, he resorts to two expedients: first, he says in No. 3, “the *chief* cause of the pro-

* *Gaz.* page 328.

† *Ibid.* Dec. 11, 1830, p. 299.

pulsion," &c.; by this, meaning that a minor or auxiliary cause is to be found in No. 1. But no where, in his application of his conclusions to the explanation of disease, does he admit the agency of this minor cause. To the word *chief*, therefore, he is not entitled; it must be *sole*. His second expedient is, to make a distinction between the *impulse against the chest* and the *propulsion against the ribs*; attributing the former to the rush of blood into the ventricle (according to No. 1), and the latter to the muscular action of the ventricle during the diastole," (according to No. 2) Now, admitting for a moment that the two causes mentioned conspire to produce the effect, the effect itself (viz. the beat against the ribs) is one and indivisible. It is impossible, therefore, even to imagine a distinction. I refer the reader to Dr. Haycraft's own explanation of this imaginary distinction, and he will see that it is unintelligible even to the writer himself*.

Dr. Haycraft annexes to this conclusion the name of Haller. He is himself, however, entitled to the whole merit of it.

To return to conclusion No. 2. Dr. Haycraft, not being acquainted with the French language, has mistaken M. Pigeaux's meaning:—"frottement" does not, in the remotest degree, mean "checking," or (as elsewhere turned) "dashing;" of which Dr. H. would find a *sensible* proof, if ordered to be "frotté;" for, according to his interpretation of the word, instead of a rubbing, he would get a drubbing. Here, again, he deserts Dr. Corrigan, who attributes neither sound to checking.

We come next to conclusion, No. 4. Dr. H. has again mangled Dr. C., whose words are, "The first sound is caused by the rush of blood from the auricles into the *dilating* ventricles."—(Ibid.) Dr. C. had the experience to know that the first sound is *prolonged*, and he therefore supposed it to take place during the *progress* of the ventricular dilatation. Dr. Haycraft, ignorant that the first sound is prolonged, perverts Dr. C.'s meaning by interpolating the word (*extreme*); and this he does for the purpose of straining Dr. C.'s views to meet his own, as will presently appear.

In conclusion 5th, Dr. Haycraft entirely suppresses Dr. C.'s idea; the words of the latter being—

"The second sound is caused by the striking together of the internal surfaces of the ventricle." The reason of this suppression is, that Dr. H. ascribes the sound to a totally different, but infinitely more improbable, and, indeed, utterly inadequate cause—namely, "the systole of the ventricle," says he, "produces a motion of the blood towards the aorta; the ventricle suddenly ceasing to contract, this motion is suddenly checked, and sound is produced!" That the ventricle does not suddenly cease to contract, any one, who cannot understand the fact on the general principles of muscular contraction, may satisfy himself by examining the heart of a rabbit, frog, &c. The experiment which Dr. H. has adduced to substantiate his position, is erroneous both in theory and application. The sound heard when the piston was drawn up and suddenly stopped, is accounted for by two causes, which he has totally overlooked:—1st, the reverberation of the fluid from the end of the piston; 2d, the reverberation of the air from the surface of the bladder, when its contractile movement was suddenly arrested. But in the heart there is neither a piston, nor air. Finally, there is not the most remote analogy between the arrangements in this experiment and the state of the heart; and, if there were, I have shown, in my experiments on the aortic valves, that all such experiments are fallacious, and unworthy of confidence. Dr. Haycraft does not believe that collision of the walls of the ventricle ever takes place completely, as he undisguisedly avows*. Again, therefore, the champion of Dr. C. abandons him.

Conclusion 6 is the only one that coincides with Dr. Corrigan's.

Conclusion 7 is redundant, being a repetition of conclusion 3.

It is now to be explained why all Dr. Haycraft's conclusions, except No. 6 (the least important), differ toto cœlo from those of Dr. C., whose theory he professes to defend.

The reason may be developed in few words. Dr. Haycraft, alluding to my refutation of Dr. Corrigan's mode of explaining the impulse in hypertrophy

* Gazette, Nov. 13, 1830, p. 196-7.

* Gazette, Nov. 13, 1830, p. 198.

with dilatation, says, "Here it must be confessed that Dr. Corrigan, on his own notion, of the contraction of the auricle being the efficient cause of the expansion of the ventricle, is *unable to give a satisfactory explanation*, and he is therefore obliged to doubt the correctness of Laennec's description*. Dr. Hope then seizes the occasion, and pronounces the difficulty to be subversive at once of the whole theory." Dr. Haycraft, by the above admission, does the same; for the doctrine that the auricular contraction is the cause of the impulse, is the very keystone of that theory, and it sinks a heap of ruins when that keystone is struck out. For this reason it is, that Dr. Haycraft mutilates the conclusions of Dr. Corrigan in the manner we have witnessed: for seeing the theory of this gentleman prostrate, he leaves it so; but taking up the fragments, without acknowledgment either to the reader, or Dr. Corrigan, he sets to work to pile up a new one.

With the materials given to him, he has not the ingenuity of Dr. Corrigan to put them together. Of the stability of his erection, the reader will presently judge.

As it is against his principle to allow that the ventricular contraction is the cause of the impulse; as I had proved, according to his own admission, that the auricular contraction was not the cause of that impulse; and as the impulse *must* be accounted for somehow, he very naturally makes it his first object to discover an adequate cause.

What is this? He finds it (borrowing the idea from my experiments on the ass, and mode of accounting for the second sound) in "the muscular action of the ventricle during the diastole!" If Dr. H. admitted that I "exclaimed with some force," (in reference to the impulse being occasioned by the auricles) "amazing!—that the feeblest portion of the heart should be the sole spring of its most violent actions!" well may he admit the force of a similar exclamation here; for those actions are now to be performed by an act of relaxation—by no other power than the elastic resilience of the heart's parietes, a power which may have a principal effect in drawing in the auricular blood, and occasioning the second sound, but

which is totally inadequate to produce the impulse (wonderfully energetic as it sometimes is) against the ribs. This, if it were not obvious on general principles, is proved to the satisfaction of all, I believe, but Dr. Haycraft, by my experiments on the ass; in which five gentlemen applied the stethoscope *immediately* to the heart, and found that, while the *systole* of the ventricle gave an impulse, "the power of which can scarcely be imagined from an examination made on the outside of the chest," the *diastole* of the ventricle gave none that was appreciable*.

But granting for a moment to Dr. Haycraft that the diastole has sufficient power to cause the impulse, let us now see how he attempts to reconcile it with other phenomena. For this purpose, let us select the points in which he considers himself strongest; namely,

First, his mode of accounting for the impulse of an aneurism of the ascending aorta, or, what is exactly tantamount to it, the sound of the diseased arch; a point on which he boasts of triumphing over "the strongest evidence that has been produced against the new theory."

Secondly, his mode of accounting for bruissement (morbid murmur) from disease of the aortic valves: a point where also he considers himself so strong as to be able to establish new rules, by which disease of those valves shall, henceforth for ever, be readily distinguished from disease of the mitral.

Let us then confront the two explanations, and see how they assimilate.

1st. "The pulsations of the aneurisms †," says he, "were caused by the *systole of the auricles*:" viz. "towards the extreme diastole of the ventricle, the systole of the auricle takes place—blood rushes into the ventricle with increased power, and it will also distend the tumor, and cause it to pulsate. This pulsation, then, will take place at the *extreme diastole* of the ventricle;

* I do not mean to say that, if a firm fulcrum were placed beneath the heart, and its lateral dilating force were thus directed more completely upwards, it would not give a certain degree of impulse. But such fulcrum does not exist in nature, and the dilating force is, therefore, expended equally in every direction, and not directed against the ribs. Accordingly, the *back-stroke*, really resulting from the diastole, is a shock in the receding direction.

† Four cases cited by Dr. Elliotson.

consequently, synchronous with the impulse at the chest *."

Thus he supposes, that, during the diastole, the blood rushes completely through the ventricle and along the aorta, to dilate an aneurismal tumor, create a murmur in the diseased arch, &c.† Let the reader retain this distinctly in recollection, while I pass to, secondly, *disease of the aortic valves*.

"Bruitement of the ventricle from disease of the sigmoids," says he, "*must* be occasioned by regurgitation from the aorta, and it can happen only during the diastole of the ventricle‡." But he has just said, that, during the diastole of the ventricle, the blood was flowing through the aorta in the opposite direction, to dilate an aneurismal tumor! Thus it is flowing out of the ventricle, and into the ventricle, at the same moment!—which is absurd.

Thus, by a single contradiction, falls the whole theory of Dr. Haycraft; for it utterly fails to account for two phenomena, which must be accounted for by any theory that pretends to be correct. This error is very unfortunate indeed; for the writer was surrounded by circumstances which glaringly pointed it out to him. To one or two of these I may advert.

If he had understood the natural function of the sigmoid valves, he would have known that, during the ventricular diastole, they are closed: blood, therefore, propelled by the auricles could not, during that diastole, be rushing through the valves into the aorta, to dilate an aneurism.

He maintains (conclusion 2) that "the cause of the first sound is, the check given to the motion of the blood in the ventricles, at the extreme diastole." But, on his own principles, no check can be given; for we have just learned from him that the blood, at that moment, is rushing through the aortic orifice, to dilate an aneurism, &c. Here, again, is a contradiction.

The check, he maintains, is occasioned, not, as the reader would imagine, by the heart dilating to the full extent of its walls: no—but by its dilating to the full extent of the pericardium! But suppose the pericardium be filled with water! Is there then no first sound of the heart?

But granting Dr. Haycraft his check, the sound so produced would be short, smart, and clear, as proved by his own experiment with the bladder full of water. This, however, is the character, not of the first sound, which he has still to learn is long and subdued, but of the second; and I have accordingly accounted for the latter sound exactly in this way. The whole novelty, indeed, of his views consists in his having transferred my explanation of the second sound to the first.

Again, Dr. Haycraft says, "bruitement from disease of the sigmoid valves *must* be occasioned by regurgitation from the aorta." Suppose, now, there be a considerable concretion, or thickening, but such as not to prevent the valve from closing; a state of parts far more common than any other. In this case, regurgitation could not take place. But not even Dr. H. will have the hardihood to deny that a concretion so circumstanced would create bruitement of the first sound. His explanation, therefore, of bruitement from disease of the sigmoid valves, is futile.

Next, how does Dr. H. prove his position last quoted, with *must* in italics? The only proof that he offers is this—"that (says he, in italics) *bruitement is only heard in a cavity into which a jet of fluid rushes; never in the vessel out of which it flows.*" This is a pure dogma, yet it is adduced as a *proof*. It is, moreover, with due submission, a false dogma; for a bruitement, generated even in the ascending aorta, may sometimes be heard as far as the apex of the heart. I do not make this assertion without being prepared to prove it by authenticated cases. And why should not sound travel backwards as well as forwards, a suitable allowance being made for the direction of the primary sonorous vibrations? A trumpet is not inaudible to the blower.

I have now shewn much more than enough to do full justice to the powers of ratiocination possessed by Dr. H.

As his theory is demolished, it would be proving too much to refute its application to my views; and the reader, if not already asleep, will perhaps congratulate himself on being released on the easy terms of an assurance, that Dr. H. maintains the same contradictory strain, "*ab ovo usque ad mala.*"

* Gazette, Nov. 13, 1830, p. 200.

† Ibid. Dec. 11, 1830, p. 327.

‡ Ibid. 325-6.

I beg leave, however, to advert briefly to one of my cases, having other reasons for doing so than the necessity of refuting the nugatory comments made upon it.

Dr. H. says, "Had I searched for cases of auriculo-ventricular valvular disease, for the purpose of illustrating Dr. Corrigan's theory, I could not have selected one better adapted than one of Dr. Hope's, published for the purpose of overthrowing it."

The case (Christian Anderson*) is one in which the two auriculo-ventricular valves were converted into rigid, and permanently patescent cartilaginous rings, the right admitting the middle finger, and the left, the extremity of the little finger. When water was poured into the ventricles, it flowed freely out through these open rings: a fact which I did not deem it necessary to insert in my abstract in the Gazette. The sigmoid valves were natural, except that the corp. sesamoidea of the aortics were enlarged. Both ventricles were dilated, the right particularly, it being larger than an orange. No thickening; flaccidity. Pulse imperceptible. The first sound commenced abruptly with a flap, which ended in a very loud filing sound, or that of sawing obscured and subdued.

In my diagnosis of this case, Dr. H. found that *disease of the valves* was omitted; he, therefore, not only uncandidly suppresses the whole of the diagnosis, as imperfect, but devotes two columns and a half to his pleasantries on the said omission. The printer is accountable for it, and the correction is to be found amongst the errata, at the end of the next No. of the Gazette†.

The diagnosis stands thus:—*Dilatation of the heart, particularly on the right side. Parietes flaccid, not thickened. Great disease of the valves.* While (as Hunter, I believe, said) "there are more false facts than false theories in the world," it were well if every such diagnosis were attested by the names of six physicians. To my former explanation of this case, I wish to make one addition. It might be said that the bruissement (which I as-

cribe to regurgitation through the auricular valves) was attributable to the enlargement of the corpora sesamoidea of the aortics. I reply, no; because the imperceptibility of the pulse, coinciding with the extreme contraction of the mitral, proves that there was not a sufficient current of blood through the aortic valves to occasion bruissement.

I must do Dr. H. the justice to add his "reformed explanation of the above case, according to the principles of the new theory." He says that, as the auricular valves were obstructed, the blood could not, during the ventricular systole, regurgitate through them. This would have been true if the valves had *not* been obstructed, for they would then have been in the natural state of occlusion; but the very circumstance of their obstruction renders it false; for, in virtue of that obstruction, they were gaping permanently wide open, one with an orifice three-fourths of an inch in diameter. He who understands the natural function of the valve, knows that such an orifice permits regurgitation. But Dr. H. does not understand that function; for he presently says, "even supposing that the auricular valves did not stop, the *parietes* of the ventricle, during its systole, *contracts* in every possible way, so that this very narrowed auricular opening, *even if deprived of its valve*, would become itself a potential valve"! Thus nature has committed a faux pas, and made a valve too much! I have elsewhere shewn that Dr. H. is equally ignorant of the function of the sigmoid valves.

His inference from the above case is, "if bruissement be heard *during the ventricular expansion*, we ought to infer that there was disease in the auricular valves." This is a transcript of my own doctrine—but in reference to the *second sound**. To the first sound it is utterly inapplicable in the present, as in every case; for, whence came the *flap* with which that sound commenced, and which Dr. H. has discreetly passed over in silence? From the auricular contraction—the only possible source? No; for Dr. H. does not admit that it occasions any sound, the two sounds of the heart being referrible, according to him, the one to the extreme diastole, and the other to the extreme systole of the ventricles.

* Gaz. Sept. 18, 1830, p. 941, which see, Dr. Haycraft's version being incorrect.

† Aug. 25, 1830, p. 1021. A similar omission was made in my paper, Gaz. Aug. 21, 1830, p. 780, where, after conclusion 9, is to be inserted—"10. The second sound is occasioned by the diastole of the ventricles." The error is corrected, Gaz. Sept. 18, 1830, p. 935, note.

* Gaz. Sept. 18, 1830, p. 942-3.

I have only to add, that the whole of the experiments, except one, in Dr. H.'s first essay, are such as I had previously tried, and rejected as equivocal*. The one is, the experiment with a bladder full of water, which is borrowed from my mode of accounting for the second sound of the heart†. Dr. Haycraft's arbitrary and imaginary distinctions between the words, simultaneous, synchronous, and coincident, are the cause of his misunderstanding my experiments on the ass. I cannot tell what is the cause of his having mistaken the *back stroke* for the second sound—a motion for a sound—or of his supposing that Dr. Corrigan had ever heard of the back stroke till the appearance of my papers.

I may, perhaps, be allowed to take the opportunity of noticing a few misconceptions of my views by other writers‡.

I have been charged with severity in my reply to the essay of Dr. Corrigan. To the feeling I am a stranger; the allegation, therefore, has given me pain. But a reply, if it would not be so meek as to be inefficient, must correspond in some degree with the tone of the original; and if the peculiarly dogmatical and dictatorial character of the essay in question be considered—if it be considered that the theory was obtruded, *vi et armis*, against the common sense of the whole profession, and that all who should presume to dissent were arraigned, by anticipation, with the charge of prejudice, it will be acknowledged that I have acted on the principle of strict forbearance. It is for truth, not victory—*de re, non de personâ*, that I have contended. A reply to Dr. Haycraft I issue with extreme reluctance, as it is impossible to tell the bare truth of his production (and justice to science, and a truly important question, compels me to do so) without cutting to the quick—though, like the surgeon, I do it with the kindest feelings. With his pleasantry, even an irritable man could not lose temper, as ridicule is the resource of the feeble, and he has still to learn that wit, for its pungency, is in some degree dependent upon elegance.

On the principle of not proving too much, I expunged, amongst many other things, my comments on the case from Bertin, cited by Dr. Corrigan—an omission to which an extraordinary degree of importance has been attached. To explain it now is superfluous, as the *new theory* is, I presume, with the Capulets. Suffice it to say that the case is misunderstood by Dr. C. It is one of *enormous hypertrophy* of the left ventricle! "The inter-ventricular septum," says Bertin, "was more than an inch thick in nearly the whole of its extent, and the exterior walls (not any where attenuated) were thickened towards their inferior part and point. . . . The cavity was so enlarged that it was able to contain eight ounces of fluid." If such a cavity had been attended with merely a natural thickness of the walls, the case would have been, according to M. Bertin's own principles, one of great hypertrophy,—his "*hypertrophie suivant l'étendue et la circonférence**." Though the external walls were flabby and lacerable, (mollasses et faciles à déchirer,) "the inter-ventricular septum presented more consistence." The right columnæ corneæ, also, were hypertrophous—(hypertrophie des colonnes du ventricule droit.) This case, then, has acquired its reputation simply because it has been inaccurately translated, and still less accurately understood. Finally, Dr. Corrigan had no right to cite the case at all; for it was one of adhesion of the pericardium, and that affection totally changes the impulse of any heart. The case is perfectly consistent with my theory of the heart's action.

I have been charged with disproving Dr. Corrigan's experiments with the stomach pump, &c. wantonly—without any useful object. In working a difficult problem, in order to prove what *is*, it is often necessary to prove what *is not*. This was my object, and, in reference to the subject in question, it was a most important one.

It is also said, that "my repetition of the stomach-pump experiment was not a repetition of Dr. Corrigan's experiment at all, as I employed a short tube, and he a long. I employed both.

I have observed on his experiment, that "the fallacy which deceived Dr. Corrigan resided in the length of his tube, the weight of which, co-operating

* Vid. Gaz. Aug. 21, 1830, p. 784 and 786.

† Gaz. Sept. 18, 1830, p. 937.

‡ I have been informed, that in reference to the objections to my views which have appeared in the *Lancet*, I am replying to Dr. Corrigan in person.

* Bertin, p. 342.

with any slight re-action generated at the discharging orifice, threw the tube, accidentally, into the positions which he describes." An incorrect version has been given of this; viz. "slight re-action, generated at the discharging orifice *accidentally*, threw," &c. It is then subjoined, "Dr. Hope has yet to learn *precision* of language and *mathematical perception*; the word *accidentally* is peculiarly unfortunate. . . . as it was in consequence of the action of certain hydraulic laws, and not of accident," &c. My own words do not convey, that re-action was generated *accidentally*, as the writer's version imports; but that, though moving under the influence of gravity and discharging reaction, the tube fell into accidental positions. A stone, thrown at random by a school-boy, moves in rigid conformity to the laws of projection, and of gravity; but if the stone were to descend on the head of the writer, he would, perhaps, be the first to admit, from the force of the argumentum ad hominem, that it could fall *accidentally*. The word, therefore, as I employed it, was *precise*, if the writer had enjoyed a *mathematical perception* of its right place.

One gentleman has flatly denied that I admit the existence of re-action at a discharging orifice at all; "a fact," he adds, "of which no one can doubt, who is but slightly tinged with mechanics*." My words are above.

The same gentleman has stated that I deny, in toto, the non synchronism of the heart's impulse with the pulse at the wrist or elsewhere, in the state of health. This is a misunderstanding.

Amongst the "few who (as I have stated in my first paper† (thought that in some cases, especially in horses, they did not coincide with mathematical precision," I was one; and, from that period, I have never stated that the impulse coincided with the radial pulse exactly, but merely "so accurately as not to admit of being ascribed to any but the same cause‡;" and, again, "so nearly, if, in every case, not perfectly, that these phenomena did not admit of being ascribed to any but the same cause§."

This want of synchronism was, at the

time of our experiments on horses, &c. referred by us to its obvious cause—the distance of the part from the heart, as afterwards explained by Dr. Elliotson* and Dr. Stokes. I had not leisure at the moment fully to investigate the point, and therefore did not presume to offer an opinion to the public; but, while I adopted the guarded language above, I demonstrated that, admitting the slight degree of non-synchronism which we noticed, it was totally insufficient for Dr. C.'s purpose; and I afterwards pointed out the fallacious nature of his mode of ascertaining the non-synchronism, whether great or small. But, ready to grant, as compatible with my own views, any degree of non-synchronism in the radial or other remote arteries, I rested, for the subversion of Dr. C.'s theory, on a fact of which I was certain—a fact with which I set out, with which I concluded—a fact which was, unknown to me, corroborated by the weighty authority of Dr. Elliotson, and which I maintain, fearless of contradiction, at the present moment—the fact that, *in the aorta*, non-synchronism is not perceptible; and this, I knew—this alone—was conclusive against the theory in question. It will not be a matter of surprise that, after having published a few essays on aneurism of the aorta, my mind was strongly impressed with what I had heard and seen in that artery.

When experimenting on small animals, as the frog and rabbit, satisfied that no inferences could be drawn while the heart was beating with extreme rapidity (200 per minute in the rabbit), I retarded its action by depriving the animal of sensibility. Of this, it has been said, "Dr. Hope, wishing to avoid his opponent's error, falls into exactly the opposite fault." No; for while he rests the whole weight of his theory upon these experiments, I regard them, and all such, as affording merely "a presumption—I do not say more." Such are my words†. My presumptions, moreover, are stronger than his; as the action of the heart is more normal when the animal is deprived of sensibility than when under the influence of pain. I say nothing of the

* Gaz. Nov. 13, 1830, p. 194.

† Gaz. 31, 1830, p. 4-3-4.

‡ Gaz. Aug. 21, 1830, p. 789.

§ Gaz. p. 785.

* The work of this gentleman was, I believe, in the press at the time that mine appeared; so that any coincidence of opinion between us, is accidental.

† Gaz. Aug. 21, 1830, p. 786.

greater humanity of the one mode of operating than of the other.

“With respect to Dr. Hope’s stethoscopic observations (it has been said) we set them at little value when compared with the great weight which must be attached to the evidence of Dr. Ferguson, a lecturer on that subject, one of the favourite pupils of Laennec, a gentleman in extensive practice, of the highest reputation, and admitted to possess a knowledge of stethoscopic evidence superior to most, and inferior to no practitioner in existence.” This is, indeed, an overwhelming personage—but he consists of two persons, Dr. F. senior, and Dr. F. junior; the former in extensive practice, and of the highest reputation; the latter known to his friends as a very promising young physician, who has scarcely commenced practice; who on one occasion gave a few lectures on stethoscopy, but who, unfortunately, does not appear in Laennec’s preface as one of his twenty favourite pupils. I say this with the utmost respect for Dr. Ferguson. With respect to the theory of the heart’s action, which I have submitted to the profession for examination, I may now perhaps say, without presumption, that, though dilident at first of its reception, I at present offer it with as much confidence as can be felt, compatibly with exemption from prejudice and openness to conviction; and this confidence I entertain, not only because nothing has yet appeared, calculated, so far as I can judge, to invalidate the theory, but because it has received the countenance of a number of the most learned and experienced members of the profession; and, finally, because I have myself had an opportunity of thoroughly examining and digesting a mass of practical evidence on which it is mainly founded.

I have, moreover, the satisfaction to see that the opinions, and even arguments, of Dr. Elliotson (all of whose opinions are practical, and therefore substantial) coincide with my own in rejecting the theory of Dr. Corrigan; and this, though each of us was ignorant of the other’s labours.

It may be finally said of Dr. Corrigan’s theory, that, independent of refutation, it falls by the disagreement of its supporters: no two are of accord, and each maintains doctrines that are completely subversive of his neigh-

bour’s. On the other hand, it has not yet been shewn that the theory which I have proposed does not reconcile all discrepancies, and meet every difficulty.

13, Lower Seymour-Street,
Portman-Square, Dec. 13, 1830.

MEMORANDUM ON LITHOPLATOMY.

To the Editor of the London Medical Gazette.

Albemarle-Street,
Dec. 11, 1830.

SIR,

I TROUBLE you with this in consequence of reading Dr. Buchanan’s paper on *Lithoplastomy*, in your No. of this day’s date, merely to say that some years ago I conceived and discussed with some of my friends the identical plan now proposed by him for converting, as he calls it, *the male urethra into a female one*; and that I at various times performed the operation on the dead subject, by introducing into the bladder the dilator, from an incision made into the membranous portion of the urethra through the prostatic portion, and always extracted the stone with facility:—once only did I use the dilator on the living subject; it was in a case very similar to that of Robert Brock, alluded to by Dr. Buchanan, and on this occasion two or three calculi, which had become impacted in the urethra, were extracted—one of the calculi, which was thrown back into the bladder, was easily removed after the use of the dilator, as witnessed by Mr. Walker, now assistant surgeon, and at that time a pupil at the Hospital. On consideration, however, it was not deemed expedient to recommend its adoption on the living subject, partly from its necessarily protracting the operation, partly from our experience of the comparative safety of the usual mode in a healthy subject and a healthy bladder, while it seemed likely to increase the dangers, or at all events not to lessen them in cases of diseased prostate or bladder; where, and perhaps where alone, a substitute for the present mode of operating would certainly be desirable.

I beg that these observations may not be construed into any wish on my part to detract from the merits or originality of Dr. Buchanan’s suggestions,

for it is not probable that he should ever have heard of my experiments made only in the presence of one of our surgeons, of the house surgeon, and a pupil or two, in the dead house of St. George's Hospital, some seven or eight years ago;—and I shall be very glad to hear of his having successfully operated on the living subject.

I may be excused, perhaps, for mentioning on this occasion, that in my opinion *lithotritie* would be a much more valuable and interesting operation if it were adapted to cases of diseased prostate, or of large stones, and to children; but, as far as I have seen, or have formed a judgment on the subject, it appears only to be applicable to those cases of moderate sized stone, healthy constitutions, and sound prostates, in which the common lateral operation is, under usual circumstances, capable of being quickly and safely performed, with I think at least as little suffering as is caused by lithotrity, and without the necessity for painful repetition, and the chances of leaving a nucleus for future urinary depositions, one instance of which has lately come within my own knowledge.

I am, sir,

Your very obedient servant,

ROBERT KEATE.

—

Dr. Buchanan on Dilatation of the Urethra.

[Dr. Buchanan's paper, above alluded to by Mr. Keate, was taken from the Glasgow Medical Journal; and by an oversight, the wrong passage was marked for extraction, so that the case of Brock, which originally appeared in this Journal, was re-published instead of the observations on the dilatation of the urethra, which, in justice to Dr. B. as well as to our readers, we now subjoin:—]

From the consideration of these two cases, (*i. e.* the cases of Mrs. Grant and Robert Brock, see Gazette, Dec. 11th,) and of another upon which I lately operated with success for stone in the bladder in the Infirmary, but which I must leave till my half yearly report, a number of interesting reflections suggest themselves. What have been the methods formerly employed to extract calculi from the urethra in the male, and

how far have they been able to supersede the operation by incision? Many cases are recorded by Fabricius Hildanus, Sanctorius, Severinus, by Hales, and Hunter, of calculi of considerable size having been extracted by curved probes, scoops, and forceps of various kinds, assisted by the warm bath and anodyne injections. Others have accomplished their object in a more simple manner, by suction with the mouth applied to the urethra, as related by Franco, Lamotte, and Chopart; or by the application of a pump, as mentioned by M. Laperche. Albucasis, Ambrose Paré, Fischer, and others, have successfully broken the calculus in the urethra, by gonges, perforators, &c. and thus in many cases effected its removal; but the method which of all others has been attended with the most decided success, and which of late years has been alone had recourse to, previous to the operation by incision, is that by dilatation.

The spontaneous passage of gravel and calculi by the urethra, led at a very early period of our art to the construction of various instruments for the facilitating of their exit, by enlarging the diameter of this conduit. Thus we find, in the writings of Prosper Alpinus, that among the Egyptians a wooden canula was made use of, perforated at its extremity. This was introduced a little way into the urethra, the neck of the bladder was firmly compressed, and the intermediate portion of the canal powerfully inflated. Elastic tubes were also introduced by these ancient masters of the healing art, of such a construction as to admit, when passed into the bladder, of considerable distention. This object being accomplished, the finger was slid up the rectum, the stone made to introduce itself into the neck of the bladder, and thus by pressure behind it, expulsion was effected.

Almost all succeeding authors, who have treated on this subject, have been little more than copyists of one another; such are Tulpius, Jessenius, and a variety of others; and I can find nothing worthy of observation, on the dilatation of the urethra for the extraction of calculi, either from this canal or from the bladder, till near our own times. Meckren, Helwig, and Boyer, on the continent, and Sir A. Cooper and Mr. Brodie in our own country, have satisfactorily proved of late years the possibility of effecting this most desira-

ble object, by the introduction of catheters and bougies of larger and larger caliber, till by thus dilating the urethra, calculi of very considerable magnitude have, with the assistance of forceps of various kinds, been extracted from the bladder. In the female, the operation of lithotomy has been by the unanimous voice of the profession of late, completely superseded by the more simple, safe, and effectual operation of lithoplatomy.

It is quite unnecessary to enter at any length into the history of stone in the bladder, or the operations for its relief, in the female; it will answer my purpose sufficiently to trace the *recent* ingenious contrivances which have answered so well, and examine the state of matters as to their applicability in the male urethra, to which canal, so far as I have been able to investigate, no such principle as *gradual* and *continued* dilatation has ever been proposed.

The clumsy and unsafe instruments used by Diomedes Cornarius, by Franco, and by Sabatier, for dilatation of the urethra, I shall not mention further than to pronounce their condemnation; and the equally ineffectual, though safer means recommended by Broomfield, of the appendix vermiformis, or that more recently used of prepared sponge, I may safely say is now never thought of; the instrument made by Weiss, of London, having taken the place of every other. If any proof were wanting of its superior utility, I would only require to refer to the pages of this journal, where will be found three cases related by Drs. Marshall, M'Farlane, and Wilson, which should convince the most sceptical; but besides these, the one related in the first part of this paper, and another still more wonderful in regard to the size of the calculus, extracted by Dr. Corkindale, and which is now in my possession, must remove every doubt on the subject.

Mr. Syme has described, in the Edinburgh Medical and Surgical Journal, an instrument for dilating the female urethra, which has one advantage over Mr. Weiss's, in the facility with which it can be *all at once* introduced in contact with the calculus; but from the shortness of its perpendicular blades (the instrument being neither more nor less than a pair of compasses bent in the middle to a right angle, with a late-

ral screw attached), and the difficulty of acting with the side screw, I would prefer that of Mr. Weiss in almost every case.

The objections which I have from experience to urge against Mr. Weiss's instrument, are the following:—1st, The difficulty of introducing the two blades at once into the bladder, from the increase of their thickness towards the screw or handle. 2d, The unequal manner in which the canal is dilated, the exterior part requiring to yield before the interior. 3d, The liability to laceration of the mucous membrane, in consequence of one part being put more on the stretch than another. 4th, The tendency of the instrument to slip out of the passage, while the dilatation is effecting. 5th, The canal being dilated in a very unfavourable direction by only *two lateral* blades, the rami of the ischii present on each side a natural barrier to their expansion.

Could an instrument not be contrived which, adopting the same principle of *gradual* and *continued* dilatation, might be applied, not only to the female, but also to the male urethra, and by this means supersede both lithotomy and lithotripsy, in the great majority of cases of stone in the bladder? I feel quite convinced that it might.

The vagina, we all know, can be easily and effectually dilated by a most admirable contrivance, named by Weiss '*speculum vaginae*.' This consists of three convex blades, each about six inches in length and four lines in breadth, connected by a handle and screw at right angles to the blades, and so constructed that, by revolving the handle on its axis, the three blades open regularly, and thus, without the smallest pain, they dilate the vagina so completely, that a full view of all the uterine region may be obtained. The instrument which I have thought of, and now got fabricated, by Mr. Norie, a respectable surgeons' instrument-maker, in this city, is upon the same principle as the above, but of course different in size; and instead of being hollow, it has for strength's sake been made solid. By means of this speculum urethrae, or vesicae, or rather *lithoplatome*, a full view of the bladder in the female is, with a properly directed light, enjoyed, and it combines all the advantages of the instruments now in use, with none of their disadvantages. But, granting

that an instrument such as my female lithoplatome is so superior to those previously used for stone in the female bladder, will the same principle hold as to the male, either for the purpose of dislodging stones from the longer and smaller urethra of our sex, or from the more distant and inaccessible bladder? I think a review of the parts concerned, or an attentive observation of the unassisted efforts of nature herself, proves this point in a very satisfactory manner. Let us for a moment compare the two conduits; that of the female is about two, that of the male about eight inches in length. In diameter there is, upon an average, a difference of perhaps not more than a line or a line and a half; they are both lined with a similar mucous membrane, and surrounded by muscular fibres, destined to very similar functions. What then, I would ask, is there to prevent a lithoplatome, as long and as thick as the largest sized bougie, from being passed into the male bladder, and its three convex converging blades, as formerly alluded to, made to perform dilatation in a similar manner as in the female? We know very well how easily a straight sound can be passed into the male bladder, and also with what superior accuracy the size, form, situation, and even structure of calculi, are able by this instrument to be ascertained. Nothing, therefore, in the curvature of this canal, its structure, or situation, can for a moment stand in our way, reasoning from the analogy of parts. But again, what are we taught by unassisted nature in her efforts to effect the object intended; or, reasoning from pathology, what conclusion are we compelled to adopt? In the second case narrated, we find a stone of two inches eight lines in one circumference, and one inch ten lines in another, passing from the bladder of this boy as far as the spongy part of the urethra; and many other cases are on record of smaller calculi passing altogether by this canal; indeed, with the exception of that part of the canal at the prostate gland, and glans penis, I feel convinced, that stones of nearly as large a size might spontaneously pass by the male as by the female urethra.

In stricture of the urethra, either spasmodic or organic, it has been observed that this canal is often very much dilated, by the accumulation of urine behind the contraction; and if this last

be timously incised, or overcome, how often is it the case that the parts regain their natural form, no incontinence of urine remaining? The inference is obvious.

What have been the diameters of the largest bougies or catheters, which have been used for stricture, or dilatation of the male urethra, I know not; but sure I am, that a half-inch tube can, with ease, be passed into the bladder in a full grown man, whose prostate is sound; and when we observe, besides, that Sir A. Cooper's forceps, for the extraction of calculi from the bladder, by the urethra, are at least three lines in diameter, to what extent of dilatation must that urethra have been exposed, where a stone was by them grasped and extracted?

From all which I think I am justified in concluding, that in all cases of calculi in the male, the lithoplatome, such as I have described, can, with perfect ease and safety, be introduced into the bladder, and the urethra so far dilated as to allow of the passage or extraction of stones of very large calibre.

As to the operation of incising the urethra, such as was practised by me in the case of the lad Brock, I have not the smallest doubt that such a procedure will for ever afterwards be superseded by the use of the lithoplatome; for, whatever scepticism may remain on the mind of the inveterate lithotomist, whether hypogastric, perineal, or recto-vesical, or of the more ingenious, though, in my opinion, more dangerous, enthusiast for lithotritry, still both must allow, that a calculus in the urethra, at whatever part it may lodge, will, with the greatest ease, by means of the lithoplatome, be expelled; and even the operations of these stone-breakers, in the same manner, be much facilitated by the diminution of the sittings, to which, in the great majority of instances, the unfortunate sufferers with urinary calculi, are necessitated in their hands to submit.

IRISH MEDICAL INTELLIGENCE.

Extract of a Letter from a Dublin Correspondent.

— I had intended to have sent you an account of the opening of the session here, but the introductions, with

one or two exceptions, were unusually dull. Doctor Macartney, than whom no man can better afford to dispense with the attractions commonly displayed upon these occasions, thought fit to indulge himself on his opening day, and delivered one of his old but excellent dissertations on the vital powers, preliminary to his annual public course of twelve lectures on general anatomy; his classes are full, as usual. Doctor Graves, the professor of the institutes of medicine, is the man to be run after, if novelty, variety, and perennial improvement, be the objects of pursuit. You are always sure to hear the newest thing from him; he is one of the readiest men alive. I shall just mention some of the heads which he touched upon in his opening lecture. After dwelling for a short time on the importance of a sound knowledge of physiology and pathology to the practising physician, he drew a comparison of the accomplished medical man of the present day at the bedside of a patient, or in consultation, with one of the old school, and of course seized the opportunity to pay a high compliment to the former for his industry and zeal. This led him to take a view of, and to point out, the improvements in medicine and the medical sciences within the last year or two, giving precedence in his well-arranged exposé—without offence he it spoken—to Irish authors and their productions. He particularized the late volume of the Hospital Reports, with which I perceive from the pages of the Gazette you are pretty familiar in England; and noticed especially Mr. Jacob's contributions to ophthalmic surgery, and Mr. Houston's discovery of the muscles of the penis. In noticing the new volume of the Medical Transactions, he spoke in the most complimentary strain of Dr. Corrigan's paper on the motions and sounds of the heart, which, he said, though without going the length of assenting to all its conclusions, was written in the true style of a philosophic anxiety for truth. He begged that, if there were any gentlemen of the press in attendance, as he understood there were, they would report it specially from him, that Dr. Corrigan's facts and arguments would demand the attention of much more able men than had yet opposed them—that they were not yet answered—that they were of the utmost interest, influencing so much as they did not only the physi-

ology, but the pathology and treatment of heart diseases. Dr. Graves then took a review of the contributions to medical science in England, alluding particularly to some of the late Dr. Gooch's practical remarks on the management of infants; also to the observations of somebody on the causes of those local pains to which hysteric females are subject—those pains especially in the left side, which are found to be owing to disorder in some of the spinal nerves—and the facility with which their cure may be effected, by directing the treatment to that part of the spine from which the nerves proceed. He alluded to the prevailing use of nit. arg.—to its use as a lotion in leucorrhœa, and to its successful application in the Meath Hospital to the cure of a species of pompholyx hitherto supposed to be incurable. He finally took a hasty view of the modern continental discoveries, more especially in physiology; and brought to a conclusion, apparently quite too soon, one of the most instructive and interesting lectures I have ever listened to. I shall mention but one more of our lecturers in my present letter, Dr. Apjohn, professor of chemistry at the College of Surgeons, a man of unquestionable talent, of brilliant qualifications as a teacher, and eminently calculated, if any man in this country be so (and Ireland has had her Kirwan), to extend the boundaries of chemical science. Like Dr. Graves in this respect, he ever keeps his auditors in the immediate wake of discovery; and like him too gave, on this occasion, an eloquent exposé of the most recent chemical improvements. It would occupy, I fear, but too large a space even to touch on the heads of his lecture; but I cannot omit a tribute of acknowledgment to his able review of M. Dupin's "Observations on the State of the Arts in England," a work in which that learned Frenchman states, that he found even the humblest individuals concerned in the British manufactories conversant with the principles of their art. M. Dupin is himself, it seems, a great patron of mechanics' institutes in his own country, delivers lectures to the members, and promotes their object with all the zeal of which he is possessed.

Some months ago I remember you gave an account of the differences which then existed between the governors of Sir Patrick Dun's Hospital and the pro-

fessors of the School of Physic: the latter wished to establish a summer *clinique* in the hospital, and to obtain, as was previously necessary, the governors' permission to avail themselves of some thirty beds for the purpose; but by the operation of conflicting interests that permission was refused. Very lately, however, the whole matter has been happily adjusted, by the fortunate accession of a conciliatory fit. What force could not wring from the managing body has been dexterously won by observing the *mollia tempora fundi*; so a summer course of clinicals is agreed on, to commence on the first of May, and Dr. Graves' attendance will secure a class. By the way, I should mention that Sir P. Dun's has been considerably enlarged, and nearly a thousand pounds has been expended in adding to it's comfort, convenience, and embellishment; it will now contain with ease 150 beds, and on emergency 200; without inconvenience. These improvements are not yet completed; but when finished, we shall have, in this clinical establishment of the Dublin School, an hospital fit to compare with any in Europe of its size.

You have heard, no doubt, of the death of Dr. Hill. The poor old man was overtaken at last by the fell pursuer, though many thought here that he would live on to 150 or 200. He must have been born some time about the year 1730, and was for more than half his life connected with the School of Physic; his last appointment was the regius professorship in the University. Few men have had more odd points about them than old Edward Hill. As a book collector he was at one time notorious; and he bound his own books, cobbled his own shoes, and did all the little mechanical jobs about his house up to his latest hour. His prejudices against certain men and measures were immovable: The sight of Sir P. Dun's was enough to throw him into a fury—a feeling which was only abated during his official attendance there as librarian to the College, with a little salary which was allowed him; and his antipathy to his venerable cotemporary, Dr. Percival, could only be compared to his hatred of the French, for whom he always entertained a sovereign contempt. His contempt, indeed, for the French people was extended to every thing French—their books, their manners, their language. In a pamphlet written in 1805, against Dr. Percival, he accuses the lat-

ter of *Gallicizing*, and of having recourse “to the idiom of the despicable language of the most despicable nation of Europe” Alas! for la grande nation, la belle France! how has it ever survived the anti-Gallican prejudices of Dr. Hill?

The emoluments of the regius professorship of medicine in the University of Dublin are very considerable; and, of course, the place was sought after with avidity by expectant candidates. It was supposed that Dr. Lendrick would stand the best chance of obtaining it, but he has not been successful. The election has fallen upon Dr. Whitley Stokes, and the appointment is highly creditable to the Board. I know not whether the name of Dr. Stokes has reached and become familiar with the medical world in England, but I should suppose not. Even here he has been for many years more conspicuous as a promoter of the agricultural and commercial interests of Ireland, than as a medical man. Very lately the institution of a zoological society in Dublin has been entirely owing to his exertions; and he has written many books connected with the practical improvement of his native country. As a scholar—as a man of extensive scientific attainments, and possessed of the most varied, unlimited, and exact general knowledge, he is admirably calculated to adorn the professorship; while his former connexion with the University, of which he was a senior fellow, and his high standing as a professional man, give him the strongest claim to be the rightful possessor of the place. I need scarcely add, that the arrangement has given very general satisfaction.

The Irish apothecaries, you are aware, have long been intent on reform, and on what they deem emancipation from the thralldom of the Hall; but I cannot say that any very strong sympathy is entertained by the public either for them or their proceedings. A prospect of success, however, seems to open to them, inasmuch as their patron, Mr. Spring Rice, is in the new ministry. He promises to bring in their new bill, and to support it with all the influence he is possessed of; while, on the other hand, it will be opposed by the influence of both colleges. The College of Physicians are particularly jealous that the existing right of appeal to them should be attempted to be abolished; and the Surgeons join them in resisting that

clause which goes to confer on the new body the important privilege of fixing its own system of education. It is certain that the document will by no means pass quietly through all its stages.

ANALYSES & NOTICES OF BOOKS.

“L'Auteur se tue à allonger ce que le lecteur se tue à abrégé.”—D'ALEMBERT.

Two Memoirs read before L'Academie Royale des Sciences, at Paris, on the successful Inhalation of diluted Chlorine in the early stages of Pulmonary Consumption, as a remedy capable of prolonging life, and of alleviating the distressing symptoms in the more advanced stages of that complaint: with Cases illustrating the Method of Administering the Gas, and shewing its beneficial effects. Translated from the French of M. GANNAL, by WILLIAM HORATIO POTTER, M. R. I. Operative Chemist.

THIS little volume—which, in courtesy, we ought perhaps to have noticed before that of Sir C. Scudamore, inasmuch as it is the elder born of the two—contains the results of some trials made in France with a view of ascertaining the extent to which chlorine possessed the power of checking the progress of phthisis. Notwithstanding the imposing expression of “successful inhalation,” which appears in the title-page, we must pronounce the evidence adduced in its favour to be lamentably deficient, and such as will prove satisfactory to no man capable of forming a judgment upon the subject. Nevertheless, the “Memoirs” of M. Gannal have this advantage over the *brochure* of Sir Charles, that they seem to contain all the author knows, whereas the latter is intended to convey the impression, that though something is communicated, more remains behind. Of all such questions as these pamphlets discuss, experience is the only satisfactory test, and with regard to a malady such as pulmonary consumption, we are warranted in trying any thing which has not already been shewn to be inefficient or injurious. For this reason we subjoin an extract from Mr. Potter's translation of M. Gannal's papers, in which the method of proceeding is so far detailed that any of our readers, who may be so inclined, will be able to satisfy themselves as to the value of the proposed remedy. We shall feel obliged

to any of them who will favour us with the results.

“First, then, it is necessary to make use of a bottle, the capacity of which is about half a litre, (1.0566 English pint.) If it were smaller, the patient would most probably be subjected to violent fits of coughing, because on the one hand the liquid chlorine would not be sufficiently diluted, and on the other the water would cool too quickly, and not emit enough aqueous vapour to saturate the gaseous chlorine. It is likewise of consequence that the tubes with which the bottle is furnished, (whether a three-necked bottle, or a bottle with one neck, fitted with a cork perforated with two holes, is made use of,) should be at least five lines in diameter. I employ with some patients bottles called Boudet's bottles, which are used for æthereal fumigations; but I have remarked that inspiration was then painful and laborious. This inconvenience was removed by substituting, for these little bottles and tubes, the apparatus I have described. The quantity of chlorine employed at each fumigation, and the number of times they are to be repeated each day, is by no means, as I have hinted already, an indifferent circumstance.

“I have always observed that the gas produced no effect if inhaled less than six times a day; and, I believe, it may be repeated as often as eight times without any bad effect ensuing. But we must not, as I have often seen done, intermit these fumigations without sufficient reason.

“Many physicians are alarmed by the accession of a slight oppression, the natural consequence of the application of a new substance to the interior surface of the air passages, and which shortly disappear by the continued contact to which the mucous membrane of the lungs soon habituates itself.

“The only symptom which made me modify the treatment was irritation of the trachea, which obtains, in some subjects, after each fumigation, particularly in cases of a morbid state of the larynx. We must then reduce the quantity of the gas, or even suspend its employment altogether, if the irritation continues several days. I adopted the following plan with certain persons, who, having commenced with ten drops, and wishing to increase the dose too rapidly, experienced this tracheal irritation:—

“I reduced the dose to five drops,

and increased it by one drop at each successive fumigation, until this disagreeable symptom was reproduced. I then diminished the dose of chlorine to five drops, as before, and as gradually increased it; and thus, in a few days, I was enabled to administer as much as from 20 to 25 drops. In every instance the patients, recommencing with the minimum dose, were enabled to exceed the quantity which had originally produced irritation. Besides, this mode of procedure is more certain of producing a stable and permanent effect; for it often happens that, during the first fifteen days, the amelioration is very sensible, though slow, but after this time the disease becomes stationary during a longer or shorter period. I have seen two patients, who, after having been relieved during nearly twenty days, have remained for a month at the point where they had previously arrived; while others, to whom I had administered the gas, in the gradual manner indicated above, have experienced a steady unvarying approximation towards a cure.

“Lastly, the quality of the gas should be considered as of the utmost consequence. Many persons think that any sort of chlorine will do: this is an error; no good results are to be expected from the employment of any but a perfectly pure gas, for be the quantity ever so small that it may contain of the muriatic acid gas, the patient will be sure to find it out. In order to give some idea of the extreme susceptibility of the respiratory organs in this respect, I shall relate what happened to one of my patients. I had prepared the chlorine which he was to inhale from oxide of manganese and muriatic acid, and in order to collect it, I made use of Woulf's apparatus arranged in the usual manner, and thought I might employ indifferently the solution of chlorine contained in either bottle; but at the first fumigation, which was made with twenty-five drops of the water from the first bottle, the patient felt a considerable degree of oppression, and complained that *the remedy did not act well*: he was seized with several fits of coughing, and experienced for half an hour a pungent sensation of heat in the throat. I made the next fumigation from the contents of the third bottle: this time he found the chlorine much better, and told me *it did now very well*. Last of all I tried

the solution of chlorine from the second bottle; he found it not so good as the last, and still complained *it did not act as well*. This fact proves how necessary it is that the gas should be absolutely pure.”

A System of Operative Surgery; containing a Description of the most approved Plans of performing the different Operations in Surgery on the Dead Body; with Remarks on their Anatomy, and accompanied with Practical Observations: being principally designed for the Use of Students in Surgery. By WILLIAM HARGRAVE, A.M. M.B. T.C.D., Member of the Royal College of Surgeons in Ireland, &c.

THIS is a useful little volume: it is well planned, and, (so far as a perusal of the account of some of the chief operations enables us to judge,) well executed. The directions for the performance of each operation are minute, without being too elaborate; they are full, but not tedious. General observations are made on the most interesting parts of operative surgery—the manipulation of the individual case is detailed, and the relative anatomy of the parts which become involved in each operation, carefully described, our author assures us not from books, but from the subject, with scalpel and the pen alternately in his hand. No danger that may possibly occur is concealed;—for instance, a case is mentioned in which the internal carotid was divided in extirpating the tonsils; yet an acquaintance with the contents of the volume is calculated to inspire confidence, because not only the difficulties are pointed out, but the methods of overcoming them rendered apparent. The author has brought down his observations to the latest date, and gives an account of the most recent operations: those on the distal side of aneurisms, lithotripsy, extirpation of the uterus, &c. Of this last, he says it has been so fairly tried, and found wanting, that he hopes it will never be performed again. We recommend the volume to the surgical student.

MEDICAL GAZETTE.

Saturday, December 25, 1830.

"Licet omnibus, licet etiam mihi, dignitatem *Ar-tis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

QUACKS AND QUACKERY.

It is now proved, beyond a doubt, that the law, however minatory in its general aspect, and professing to provide for the public safety, has really nothing very terrible in it, and affords but feeble protection against the practices of successful quackery. Mr. St. John Long has disposed of himself just as it pleased him best: finding that he could not be accommodated with a suit of apartments in Newgate, and permission to receive his patients, he has been so kind as to withdraw himself from our shores; and we think we may fairly congratulate the public on the circumstance. This step of his, if owing to any thing but the suiting of his own perfect convenience, is entirely to be attributed to the force of public opinion—certainly in no sort of way to the force or efficiency of the law. No step was taken till it was ascertained to be too late; but no sooner was the ocean known to roll between him and his pursuers, than great exertions were made for his apprehension.

We not long ago, as our readers are aware, took a view of the state of our statute books on the subject of irregular practice in medicine, and we found that there was good and wholesome provision—if it were any thing more than a mere dead letter—for the discountenancing and prohibiting of quacks; but the fact is, that no laws, however menacing, or however vigorously carried into effect, can suppress or deter those gentry. Quacks there will be as long as there are dupes to be found on whom to practise; and quacks not only among the low and uneducated, but among those occupying the higher walks of the profession.

We have received a letter, calling upon us to use our influence "in giving a death-blow to quackery;" followed by an assurance that the public mind "is as ripe for reform in medical as in other politics." Alas! how little does our correspondent know the "public mind." One quack may be successfully exposed, but another still succeeds; and the race will flourish as long as credulity continues to be an ingredient in the human mind. Even within the short period since St. John Long disappeared from the scene, several competitors for notoriety have presented themselves. Among these, not the least important personage is "Professor"—the word is rather in bad repute—*Professor* Lucett. Our readers cannot have forgot the suicide of the Rev. Mr. Kennett, attended as it was with circumstances of more than usual horror. One would have thought that such an incident bore too close a resemblance, in the fatality of its result, to the cases of manslaughter which have of late excited so much public indignation, for any one voluntarily to make it the ground of a puffing advertisement: but your thorough-going quack has a wonderful aptitude at turning any thing to account which is likely to attract the public eye and dazzle the optics of the multitude. Accordingly the occurrence of the shocking event, which possibly might never have taken place had not the unfortunate gentleman become an inmate of the Professor's asylum, is nevertheless attributed by him exclusively to the circumstance of his removal, and is seized upon as a pretext for blazoning forth his own superiority in restoring persons "declared to be incurable in Bethlem and St. Luke's Hospitals;" and for which, God save the mark! he "has received, from the Lords of the Treasury, the sum of two hundred guineas;"—a statement made by the Professor in a report of the Coroner's Inquest sent to the *Observer*.

Mr. — we beg his pardon — Professor Lucett's "system" appears to consist in avoiding the application of restraint, and in the administration of full diet and wine, "with the pulse at 120, the eyes inflamed, and the countenance flushed!"

The circumstances of this individual case, divested of the colouring which has been given to it in some of the papers, appear to be as follow. The reverend gentleman had laboured for some time under some degree of mental derangement, but which had become greatly aggravated by his imagining himself an object of suspicion, as an incendiary and a promoter of the disturbances which at present prevail in different parts of the country. His demeanour having become more violent than usual, Professor Lucett was sent for, who so far gained the confidence of those about him that they consented to the patient being removed to his asylum. Here he was visited next day by Dr. James Johnson, his ordinary attendant, who was unreasonable enough to question the efficacy of the diet and regimen above mentioned in such a case, as well as to doubt the entire prudence of leaving the patient "with no keeper but a female servant." On these points, therefore, the Doctor and the *Professor* joined issue. Dr. Johnson cautioned the friends of Mr. Kennett, and they had him removed next day. The immediate cause of his committing suicide seems to have been that he took Mr. Lucett for the real perpetrator of the crimes for which he imagined the police to be pursuing himself. He intended to give up the worthy Professor into the hands of justice, and thus effect his own vindication; but having lost sight of the supposed culprit—who had taken his departure—he gave himself up for lost, and seized the opportunity which the absence of a regular keeper presented, to destroy himself.

Of Professor Lucett's "system" we know nothing but what we have stated above, yet that little will be sufficient to inspire caution in admitting its claims to confidence;—to say nothing of the distrust with which rational men must regard all pretensions which require concealment for their support. But there is another point on which we would touch,—this person, who signs himself "James Lucett, medical professor for the cure of insanity, Brompton Villa, Middlesex," must be aware that it is illegal, either in the county of Middlesex, or elsewhere, for any one—even though he be a *Professor*, to receive a lunatic without certain prescribed forms having been gone through; and what we desire to know is, whether he did or did not fulfil the requisitions of the law before he admitted the reverend patient into his house? If he did not, which we suspect to be the case, then the Commissioners ought, without hesitation or delay, to withdraw his license. If they permit a condition so imperative on all who keep any asylum for the insane to be violated, though but in one instance without immediate punishment, they neglect their own duty, and compromise the interests of the public.

But, alas! Professor Lucett's is not the only piece of quackery which presses upon our notice. He who has recourse to any unworthy artifice—he who catches at the fashionable folly of the day—who seizes the "inhaler," for example, and tries to blow another bubble in the room of the one just burst—or he who condescends to advertise his merits by handbills sent round to his neighbours, like a tradesman pressing his cheap wares—his tea, sugar, and candles—upon their notice—all these equally depart from the fair and honourable practice of our profession, and therefore are equally guilty of quackery. It is with pain that we allude to this last illustration; but it has been almost

forced upon us by a letter which we have received, enclosing a handbill such as we have described. (See the subjoined letter.) Much as we disapprove of such method of advertisement, we should not have given insertion to the notice had it not obviously been printed by the writer for the purpose of circulation. To charging for attendance, instead of medicine, we are far from objecting—as to Mr. Mackelcan's mode of making his intentions known, we leave it for his brethren to form their own judgment.

Perhaps the above remarks, and a little reflection, will lead our correspondent, Chirurgiens, to agree with us, that before “a death-blow” can be given to quackery, the *regular* quacks must be got rid of as well as the irregular;—the public must be enlightened on medical subjects to an extent far beyond what they at present are—and none must practise the healing art but men whose conduct is regulated by an *esprit de corps*, which makes the honour of their profession dearer to them than its profits.

NEW MODE OF ADVERTISING.

To the Editor of the London Medical Gazette.

SIR,

Although I am not myself a medical practitioner, I am extremely desirous of doing all in my power to forward the progress of those who are just entering upon their professional career. The enclosed circular was lately left at my house, and will no doubt have great influence in the neighbourhood. Pray oblige me by giving it to the public, that your young readers may have an opportunity of following the very professional and gentlemanlike appeal of Mr. Mackelcan.—I am, Sir,

Your obedient servant,

X X.

“Mr. MACKELCAN, being convinced of the disadvantages to the public attending the present mode of remunerating Medical Men, by paying them according to the quantity of Drugs they send to their Patients, and having

adopted the plan of charging *Five Shillings for Advice and Medicine*, (when employed for Servants, Three Shillings and Sixpence,) which is free from this objection, and which has been much approved of by those who have honoured him with their confidence, takes the liberty of making it known to the Families resident in this Neighbourhood, that they may avail themselves of it, should they think it desirable.

“6, Devonshire-Street, Portland-Place.”

JOKE AND NO JOKE.

THE Editor of the Literary Gazette, in a recent number, ventures to offer an explanation of some circumstances relating to his connexion with St. John Long. More than four months ago it was our lot to mention the fact of his having been thrown from a horse presented him by that much-admired quack: the story speedily went the round of the newspapers and periodicals, and elicited all manner of facetious remarks from the various writers; in short, not a man, woman, or child, in the united kingdom, was ignorant of the mishap which had befallen the worthy editor. But, lo! by some fatuity on his part, (we cannot call it by a more gentle term) he has been so ill-advised as to deny his right to the commiseration of the country; thinking it, perhaps, rather discreditable just at this moment to be considered as under obligation to a convicted felon, and to have been his special defender, if not his decoy, at an important period of his remarkable career. He now comes forward to say that the affairs of the gift-horse was *all a joke!* Well, how stupid we have been; and so it was only a mere joke after all,—what a strange thing that people should have been hoaxed for such a length of time without finding it out—without even a suspicion of the pleasantry. How refined it must have been, and how heartily must the learned editor have enjoyed the amusement which he kept so entirely to himself.

It is rather unfortunate for us, however, that we do not "take it" even yet. We must confess we can hardly comprehend how even so facetious a person as the Editor of the Literary Gazette should select so strange a subject of merriment as to tell his medical friend (as he himself informs us) that the horse which threw him was given him by St. John Long. At all events it is quite certain that the fall was no joke: it is quite a fact that the poor gentleman was carried into the Westminster Hospital in a most unhappy plight, and that the merriment ended in many days of sickness and discomfort. But this is not the only joke the editor seems desirous of playing off on his readers: he now tells us that he *never expressed an opinion* about Long! We have not time nor inclination to turn back to the pages which he notoriously prostituted to the advocacy of Long and his pretensions*; but the very devoting of so many successive papers in his journal to the subject, were evidence sufficient, if any evidence were wanting, of the exertions he made in the propagation of ignorance and imposture.

As to the poor and imbecile attempt which he makes in conclusion, to say something even now in behalf of Long, and consistently with his former efforts, in the cause of quackery also, it is done with such an air of humility, and looks so like sneaking kindness for his fallen friend, that we are perfectly willing to let it pass; and we shall merely add, for the editor's information, that all his petty points with regard to the state of the law, and the justice of the case, have been fully anticipated and answered in our pages long since. To those pages we refer him; or if we be too medical—too *regularly* medical we should say, we have then great pleasure in recommending him to peruse a very clever

and comprehensive article on quackery in general, and on his friend St. John Long in particular, in the current number of the Monthly Magazine.

PASSAGES FROM THE DIARY OF A LATE PHYSICIAN.

BLACKWOOD this month contains some more of the "passages," with a note prefixed, in which our brief observations on some of the former ones are rather ill-naturedly dealt with. The *redacteur* of the papers wishes evidently enough to explain, in some way or other, the cause of the coincidence which we pointed out between a certain part of the diary, and a passage in one of Sir Henry Hallford's papers, read some time ago before the College of Physicians, at one of their evening meetings, and published in this journal; but he candidly confesses it to be "impossible" to give a satisfactory explanation—at least to us and to the public; to Sir Henry Hallford, however, he assures us he has given the most perfect satisfaction; and for our parts, if the knowledge of this fact content the public, it will abundantly satisfy us. We cannot, in the meantime, help suspecting that the only *possible* explanation may be that of Mr. Puff, in the Critic, when he coolly accounts for an identical coincidence that was detected between him and Shakspeare.

We have said in our former remarks that we had no objection to the plan and spirit of those "passages"—nay, we have read most of them with much pleasure and delight. They contain powerful analyses of many of the most intricate and interesting passions of the human soul, and the incidents are put together with extraordinary felicity, constituting, on the whole, a series of romances of the most moving kind. But our pleasure has not been unmixed, nor can we promise much for the improvement likely to be afforded in any quarter by some of the disclosures of human weakness, folly, and crime, which those passages contain. In the present number there is one of the most revolting pictures of vice personified that we have ever met with—in the "man about town," who is a very incarnate fiend, and whose career ought

* We find that this has been amply done by the Athenæum of Saturday last.

to be entitled the "Real Devil's Walk," if that title had not been already pre-occupied by a right pleasant and witty conceit of quite a different description. A more disgusting portrait, in short, of human nature in its worst features could scarcely be drawn, than that which we find in the present Blackwood. The conduct of the writer, the compiler, or more especially the editor, who could permit himself to put forth the story of such an abandoned profligate as the subject of the sketch to which we allude—persevering in his course of infamy, and perishing at last lingeringly by loathsome disease—in the description of which several pages are expended—and this in a periodical of such extensive circulation, amongst readers too of the other sex—must ever appear to us to be an egregious failure of editorial discretion, however by pandering to the worst of passions it may contribute to the sale and notoriety of the work. We cannot but conclude, that if the *redacteur* of the papers in question sink a shaft into the hitherto unexplored mine of medical experience with no better product than such as he here presents us with—it were better he should close up the shaft altogether and for ever, or leave the working of it to other hands than his.

LONDON UNIVERSITY.

THE Professorships of Physiology and Medicine are declared to be vacant, and candidates are invited to offer themselves; but as the Spring course of Physiology is advertised to be given by Dr. Southwood Smith, we presume that he is to be regarded as the future professor. The lectures on Medical Jurisprudence are to be given jointly by Dr. A. T. Thomson and Mr. Amos—an arrangement which, we think, promises exceedingly well.

MEDICAL SCHOOL IN EGYPT.

SCIENCE seems once more, after the revolution of ages, about to establish a footing among the Egyptians. M. Clot, a French surgeon, was appointed to the office of inspector of the public health at Abou-Zabel, in 1825, and had soon obtained sufficient influence to have an hospital

built, on the plan of those in Europe. This step once gained, his attention was next directed to the establishment of a medical school. Here, however, a great difficulty presented itself, in the religious prejudices of the Mussulmans, who look upon the dead as sacred, and any anatomical examination of the body as sacrilege. Repeated conferences took place between M. Clot and the influential men of the country, who at length—more reasonable than some legislators nearer home—became convinced that the instruction of the living was of more real importance than superstitious observance of the dead, and gave their consent to the practice of dissection, provided it was conducted with prudence and decorum. From this moment the chief obstacle in the way of an efficient school was removed; and there only remained to assemble a sufficient number of Europeans qualified to teach the different branches of science. Some young French and Italian physicians offered themselves as professors; and within a year a tolerably complete staff was appointed—one in which we find almost every department of the healing art duly represented. The masters provided, scholars were next to be sought; and of these an hundred, well versed in Arabic, were speedily procured. As yet the communication of knowledge has been retarded, by the necessity of transmitting it through the medium of a third person, each professor having a translator attached to him; this person dictates the discourse to the students in Arabic; and according to M. Clot, great progress has already been made in conveying instruction. Nor can it be doubted that this will soon admit of direct transmission, either by those who are admitted as students being first made to learn French, or by the masters becoming sufficiently acquainted with Arabic.

We subjoin an account of some cases of that troublesome disease produced by the dracunculus:—

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

HOSPITAL AT ABOU-ZABEL.

Cases of Dracunculus.

CASE I.—A negro, aged 25, a soldier

in the Egyptian army, was admitted on the 2d of April, 1825, having a painful swelling of the scrotum, accompanied by fever; he was bled, and an emollient poultice was applied to the scrotum; about ten days after an abscess had formed on the right side of the scrotum, which having been opened and a small quantity of purulent serum evacuated, a dracunculus showed itself in the wound, four inches of which were immediately extracted, and rolled over a piece of plaster. The extraction was repeated daily, so that on the 18th the whole worm, twenty-three inches in length, was removed.

CASE II.—A negro boy was admitted on the 12th of May, with ptyalism and a painful tumor at the point of the tongue, gums being swelled and bleeding. After a careful examination of the mouth, a small fluctuating tumor was discovered near the frenum of the tongue, which was opened, and discharged, with a small quantity of purulent serum, part of a dracunculus, which was seized, and extracted without any difficulty; it was four inches in length. The patient was perfectly cured after a few days under the use of an emollient gargle.

CASE III.—A negro, twenty years of age, was admitted on the 8th of June, with swelling and violent pain of the penis; it was at first taken for a syphilitic affection, but on closer examination a dracunculus was found encircling the member; it very much resembled an inflamed vein, and caused great pain along the spermatic cord. Under the use of an emollient poultice, a vesicle formed behind the glans; it opened on the 18th, and discharged about half an inch of a dracunculus, which was fixed to some sticking-plaster and slowly extracted; this caused, however, such violent pain, that the extraction was not completed before the 1st of July, although the whole length of the worm did not exceed five and a half inches.

CASE IV.—An Arab soldier, thirty years of age, was admitted on the 20th October, with an inflammatory swelling of the left leg, which was very painful. He was bled, and M. Clot suspected a dracunculus, though he was unable to trace it; the leg was covered with a poultice, and after ten days a vesicle formed at the outer ankle; it was opened, and from it part of a dracunculus extracted and fixed to a piece of sticking-

plaster; unfortunately, on Nov. 5th it broke; the purulent discharge however continued, and another abscess soon formed about four inches above the first, from which another portion of the worm was extracted. On the 23d the extraction seemed to be complete; the inflammation of the leg had subsided, and the patient was discharged apparently well on the 15th of December. On the 23d, however, he returned with pain in the ham, from which, within six days, ten inches of worm were extracted. From this time the patient remained perfectly well. It was impossible to decide whether the three pieces belonged to one worm only, or formed three distinct worms; but M. Clot suspected the latter to be the case, the three tumors having formed in the same parts, and nearly in the same line.

In 1822, M. Dussap, the chief medical officer of the Egyptian army, treated at the hospital of Soutan about four hundred individuals affected with dracunculus, and at length took the disease himself on the left hand. The first symptom, he says, was a painful itching on the dorsal surface. He is of opinion that the frequency of dracunculus dates only from the above year, and was communicated to the Arabs and Egyptians by negroes. He believes in the immediate transmission of the worm, and quotes as a proof his frequent observation of dogs, who became affected with it after having eaten the poultices from patients with dracunculus.

CASE V.—M. Dot, French teacher in the service of the Pacha, became affected with dracunculus in 1824; it began with a small vesicle over the metatarsal bones of the first and second toe of the right foot; it was surrounded by a deep redness, and caused very painful itching. After a fortnight the pain became so violent as to render M. Dot incapable of any exertion; the vesicle having broken, the worm became visible, and seven inches of it were extracted, a process which gave excruciating pain, but without being followed by any diminution of the symptoms. After a short time another vesicle formed over the outer ankle; from this a dracunculus, eleven inches in length, was extracted, and under the application of poultices, two more abscesses formed over the tendo Achillis, from which two worms were drawn out, one two, another twenty-four, inches in length. The

inflammation of the leg, however, continued, and even became alarming; the swelling increased, the pain was very violent, and accompanied by intense fever; it was feared amputation would become necessary. A number of deep incisions were made at the places from whence the worms issued, and a quantity of bloody and purulent matter was evacuated with the remains of worms, the greater portion of which had been previously extracted. Of the two first worms, about four inches only were found to have been left, of the third seven, and of the fourth two. After this time M. Dot speedily recovered.

In 1820, Mehrid Ali sent an expedition to Cordofan, where M. Marduchi, physician to the troops, remained three years. During the first two years, no case of dracunculus was observed; in the course of the third, however, after some very heavy rains, nearly the fourth part of the troops became affected with it, and M. Marduchi himself had it in twenty-eight different places, which, according to the statement of the natives, is unprecedented. In a letter to M. Clot he stated, that before the beginning of the disease he was affected with an unpleasant itching and slight swelling of the legs, on which, after about twenty days, small and very painful tumors formed, which, under the use of poultices, opened, and gave issue to portions of worms, which were gradually extracted; four, however, broke; and this accident was followed by excruciating pain, and such intense inflammation, that twice gangrene was produced, and it was not till after four months that the wounds healed. All the worms were in the lower extremities with the exception of one, which formed over the coccyx.—*Lancette Française*.

HOPITAL DE LA PITIE.

M. Lisfranc on the Treatment of Amaurosis.

THIS disease was for a long time considered incurable, and to be the result of an alteration in the optic nerve or the retina; but the light of pathology and physiology came to elucidate the influence which the fifth pair had on vision. Petit, of Namur, had observed an individual, who, in consequence of a wound of the eyelid, had lost the power

of vision on that side; but the observer did not follow up his remark, as he might have done, to the opinions which at present exclusively prevail. Vicq-d'Azyr subsequently made numerous experiments on animals, experiments which have since been repeated by M. Ribes, and they all tend to confirm the observation of Petit.

In the case of a patient who some years ago was under the care of M. Serres, at La Pitié, the sight, smell, and taste were deficient on one side; upon examination after death, the intracranial portion of the fifth pair was found to be thrice the usual size, yellow, and pulpy.

With respect to the ordinary remedies, the actual cautery and moxa have been attended with success, but have also often been the cause of serious accidents: vesications along the track of the nervous branches—a remedy employed in the Hôtel Dieu for the last twenty years, present great advantages. M. Gondret has derived excellent effects from his ammoniacal pomade. An oculist has gathered much fame for his application of friction to the cornea by means of a little file of gold. A seton to the nape of the neck has effected cures, but in too inconsiderable a number of cases to warrant its being esteemed as a general method. According to circumstances, as the complaint may be traced to plethora, to a nervous temperament, to rheumatism, to gout, or other causes—bleeding, antispasmodics, derivatives, and such like, may promise beneficial results. Cauterization of the cornea, by means of nitrate of silver, has procured excellent effects, but sometimes has occasioned accidents more or less serious: in the wards, at this very moment, there is an example of a patient who, in consequence of its application, was immediately seized with vomiting, that recurred at intervals for a whole day.

The seton, the cantery, and the moxa ought to be discarded altogether from the therapeutics of amaurosis; the latter two because they occasionally produce caries of the cranium, and severe inflammation of the meningeal membranes. In applying the pomade of Gondret, it is spread on a piece of linen about the size of a five-franc piece, allowing it a line for thickness, and one or two lines for margin; and it is then applied to the sinciput, previously shaved. It is

eminently proper in cases where the pupil is dilated. But it sometimes happens that the pupil contracts strongly, and that the patient, who had preserved some portion of sight until the remedy was tried, loses it then completely: this sign is, however, favourable, inasmuch as it ascertains the power of the remedy. Belladonna must then be immediately had recourse to, and it is to be rubbed well round the base of the orbit. If other accidents supervene, such as headache, pains, &c. they must be met with antiphlogistics, and the remedy repeated on the same spot, unless it have occasioned eschars, which require that it be placed elsewhere. It happens, too, that sometimes the powers of the remedy lie dormant, but only to act the more efficaciously at last: thus the pomade had been applied for three months to a patient in la Pitié without any success, but in the course of the fourth the sight was perfectly restored. The activity of this remedy sometimes renders it dangerous, in the opinion of M. Lisfranc, and in this respect he thinks the vesicatory to be preferred: without being so active, it is more manageable on large and numerous surfaces: two patients are at present experiencing its benefit: it has been applied to their forehead, temple, &c.

That cauterization of the cornea is beneficial, there are proofs within the walls of la Pitié. It is done by fixing the eye as for the cataract operation, and then rapidly drawing across the base of the cornea a piece of lapis infernalis, pointed like a pencil: the eye is then instantly washed with tepid water, and the result is a small bluish eschar, which disappears totally at the end of four or five days. If pain or inflammation arise they must be treated with the proper remedies. It will happen sometimes in this case, as in Goudret's practice, that the patient sees less than he did before, but this state is transitory, and vision rapidly becomes improved. When the eschar disappears, cauterization is again practised, and so on, until the disease be brought under control; for it may happen that the first applications remain inefficacious, and the last alone successful. As to the length of the intervals, and the number of the applications, this must altogether depend on the character and intensity of the complaint.

The therapeutical remedies then, ac-

cording to M. Lisfranc, should be placed in the following order of relative value—vesicatories, Goudret's pomade, cauterization of the cornea: then the seton, moxa, and the actual cautery, the use of which is precarious or dangerous.—*Lancette Française.*

DUBLIN LYING-IN HOSPITAL.

Two cases of Recovery from Laceration of the Uterus and Vagina.

THE following interesting cases are published by Dr. Collins, in a new series which has just been commenced of the Dublin Medical Transactions.

CASE I.—Jemima Day, aged 25, was admitted into the hospital in labour of her third child (a boy), with the hand and arm protruded out of the vagina as far as the elbow.

The funis was prolapsed and without pulsation.

She had been attended previous to admission by two surgeons and a midwife, and it was reported the midwife had mistaken the hand for the foot, and pulled it down.

When admitted she was in a very debilitated state, with a feeble quick pulse, ghastly countenance, expressive of much anxiety. It was evident she had suffered some most serious injury, and, from the symptoms present, rupture of the vagina or uterus was too apparent.

She had got 60 drops of tincture of opium before admission.

On examination per vaginam, the shoulder and body of the child were found to be forced so low, and so firmly fixed in the pelvis, as to completely forbid a y attempt to turn the child, nor was there any necessity to do so, as it was dead.

The thorax of the child was then perforated and broken down, and the breech was afterwards brought down with the crotchet, without the least difficulty.

On introducing the hand into the vagina after the child and placenta were taken away, an extensive laceration was found at the junction of the cervix uteri with the vagina posteriorly.

I placed the parts as nearly as possible in their natural position, guarding carefully against any portion of the intestines being included in the lacerated part, at the same time removing as much of the clotted blood as could be got away.

It was evening when she was admitted into the hospital, and after the delivery, &c. was completed, and her bed made dry, she was ordered a powder containing 10 grains of calomel, and the same quantity of jalap,

which remained on the stomach, and operated freely on the bowels.

The following morning the pulse was 130. There was much tenderness of the abdomen, and she had rested little.

Three dozen leeches were ordered to the abdomen, and a warm bath afterwards; she was directed also to be stuped every third hour with flannels, wrung out of boiling water, as hot as could be endured.

Much relief was procured by these means, yet considerable tenderness still remained; however, by repeating the leeches and warm bath, with stuping every third hour, the distress subsided in a great measure before the end of the fourth day.

The pulse gradually returned to its natural state, she became stronger every day, and she left the hospital perfectly well on the twenty-third day after delivery, and returned at the end of three months in good health.

There was no other treatment adopted in this case but what is stated above, except that the strictest attention was paid to the regulation of her bowels; and the medicines used for this purpose were, castor oil, infusion of senna with sulphate of magnesia and tincture of jalap, or the common saline effervescing draught, made with the carbonate of soda, with the addition of one ounce of tartrate of soda and potass to eight ounces, given with lemon juice.

Her diet was also attended to, and nothing either difficult of digestion or stimulating was given. Fruit of different kinds, both raw and stewed, whey, gruel, tea, flummery, and latterly broths, were her chief food.

The bowels, from the commencement, were easily affected by the smallest quantity of medicine.

CASE II.—Anne Woodward, aged 30, was admitted in labour of her sixth child (a girl) at six o'clock in the evening of the 27th of October.

Her labour was reported to have commenced seven hours previous to admission.

When she came into the hospital, the uterus was acting briskly, and the head of the child advanced rapidly, so much so, that those who were in attendance thought it would have been expelled every pain. Suddenly, however, the uterine action completely ceased, and considerable debility, great distress of countenance, vomiting, and other symptoms, strongly indicating rupture of the uterus, ensued.

The head of the child was low down, and pressing on the neck of the bladder, so much so, that the catheter could not be introduced, and as immediate delivery was necessary, the head was lessened, and the child brought away with the crotchet. The uterus assisted strongly in expelling the child and placenta;

however, on introducing the hand into the vagina afterwards, a most extensive laceration was found at the junction of the cervix uteri with the vagina anteriorly, and the intestines had fallen through the opening into the vagina.

After returning the intestines carefully, the edges of the laceration were brought as nearly as possible in contact, and the patient was enjoined to remain perfectly quiet during two hours on the couch where she was delivered. She was then cautiously carried to bed, and a powder containing eight grains of calomel and fifteen of jalap, with half a grain of powdered opium, administered.

Following morning, October 29th, nine o'clock—Pulse 114 and feeble; rested badly; abdomen distended, and much tenderness on pressure; bowels have not been opened.

To have one ounce of castor oil and one of tincture of jalap immediately; three dozen leeches to the abdomen, and afterwards to be put in the warm bath, and permitted to remain in it as long as she finds it agreeable; the abdomen to be fomented every second hour with flannels, wrung out of boiling water, at hot as the patient can bear.

The oil and tincture of jalap to be repeated in three hours, if the first had no effect.

Nine o'clock, P.M.—Pulse 120; tongue foul. Purgative draught was repeated; bowels have been well emptied; abdomen softer and less painful on pressure. Stuping to be diligently continued.

30th, nine o'clock A.M.—Pulse 114; tongue foul; got some rest; abdomen full; uterus enlarged, and much tenderness on pressure; bowels open.

Three dozen leeches to the abdomen in the region of the uterus; afterwards a warm bath; stupes to be continued every second hour.

To take the common saline effervescing draught, with the addition of one ounce of tartrate of soda and potass to eight ounces.

Nine o'clock, P.M.—Pulse 120; felt relief from the leeches and bath; bowels open; abdomen softer, and much less painful on pressure.

Fomentations and saline draughts to be continued.

31st, nine A.M.—Pulse 114; rested tolerably; drank freely; bowels open; uterus still continues enlarged, hard, and tender on pressure.

Three dozen leeches and warm bath to be repeated; stuping to be continued every second hour, and to have three drachms of castor oil in an ounce of pennyroyal water.

Nov. 1st, nine A.M.—Pulse 114; rested well; drank freely; abdomen soft and free from pain; uterus still hard and enlarged; bowels open.

Fomentations to be continued to the abdomen, and the saline effervescent draught with Rochelle salt to be repeated.

2d, nine A.M.—Pulse 114; tongue moister and cleaner; rested well; drinks freely and feels easy, except when she moves in the bed; abdomen nearly free from pain; bowels open.

Stupes to be continued occasionally.

3d, nine A.M.—Pulse 114; in every respect improved since last visit. She gradually continued to amend, and was discharged perfectly well on the 30th of November, one month and two days from the date of her delivery.

Her pulse from the time of her delivery was feeble, and continued for the first twelve days regularly to beat 114 in the morning, and 120 in the evening.

At the end of this time it fell to 98, and gradually became stronger and more natural.

On the fifteenth and sixteenth days after delivery, there was a very considerable discharge of unhealthy pus from the vagina, to the amount perhaps of a pint in the first instance, and less the second. It had probably collected about the lacerated part; however, it did not interfere with her recovery, and her strength being supported by nutritious diet, she was not reduced by it.

After the first twelve days, she was liberally supplied with chicken broth, chicken, stewed apples, grapes occasionally, and a little wine. She also got the cold infusion of bark in the form of an effervescent draught; she got no medicine of any kind after the first four days, except the bark draught, and occasionally the saline effervescent draught with Rochelle salt, or three or four drachms of castor oil, to keep the bowels gently open.

I have avoided as much as possible lengthening the detail of these cases, by confining myself to the most important circumstances in each.

The bowels from the commencement, in both cases, the reader may observe, were easily acted on by the smallest doses of medicine, after in the first instance having been well emptied, which greatly contributed to the favourable termination of both. In the majority of cases where laceration of the vagina or uterus takes place, the bowels yield with difficulty to the effects of medicine, and in many instances it will be found quite impracticable to purge the patient with the largest doses of the most drastic purgatives until death is near at hand, and then the medicines begin to act violently. It is an object of the greatest importance, in

such cases, to have the bowels early opened, and afterwards to keep up their action by mild purgatives, at the same time using every means in our power to counteract inflammation; and no means are more likely to do so than those already mentioned. In both cases, it may be observed, that the same plan of treatment was pursued; and it cannot be too strongly recommended to the notice of professional men, that early and active means of counteracting the dangerous and sudden inflammation that sets in, in all cases of this kind, is a matter of the utmost importance. In the above instances, when the tenderness of the abdomen was subdued, the dangerous symptoms gradually subsided; and it is singular, that in both it was nearly removed about the end of the fourth, or in the course of the fifth day after delivery. If possible, the practitioner should avoid letting the child escape out of the uterus, into the cavity of the abdomen, in the delivery; sometimes it unavoidably does escape as soon as the accident takes place; but in many instances it may be prevented, by using caution during the delivery, particularly in those cases where we perforate the head. The opening should be made as much at the side as we can, so as to cause the opposite side of the head to press against the pelvis, and at the same time having an assistant to press strongly on the abdomen of the patient, to keep the uterus as fixed as possible. The perforator should not be pressed with great force against the head, lest it should suddenly recede. In cases of this kind attempts have been made to deliver with the forceps, but the introduction of the blades generally forces the child's head out of reach. The child dies also shortly after the laceration takes place, and the dimensions of the pelvis are often defective—all which circumstances prove their inutility in most cases. When the child escapes out of the uterus into the cavity of the abdomen, it is now the general practice, and undoubtedly the best, to introduce the hand cautiously through the lacerated parts into the abdominal cavity, and bring down the feet of the child, and the sooner this is done after the accident the better. In such cases, much care should be taken to return any of the intestines that fall through the lacerated part into the vagina, otherwise strangulation may take place.

ST. GEORGE'S HOSPITAL.

CASES OF CHIMNEY-SWEEPER'S CANCER.

CASE I.—Cancerous Ulcer and Warty Fungus in the Left Groin of a Chimney-Sweeper, beginning with a Wart upon the Scrotum—No relief.

JOHN ALDRIDGE, æt. 30, admitted April 21, 1830, under the care of Mr. Babington.

In the left groin, above Poupart's ligament, nearly in the situation of the internal ring, an ulcerated opening in the integuments about the size of an egg; it is almost entirely filled up by a warty-looking fungus, with a sloughy depression in the centre. Below the fungus, nearer Poupart's ligament, is a mass of enlarged and hardened glands, or at least an irregular induration feeling like such; it is situated immediately beneath the abdominal muscles, and extends from the anterior superior spinous process of the ilium to the pubes. A good deal of pain in the centre of the tumor. Health tolerable.

A year ago he perceived a small wart on the scrotum, which he picked off, and a cicatrix without any induration remained. In December last he perceived an enlargement in the left groin, which he accidentally struck, and which thenceforth increased rather rapidly in size. In the beginning of February the surface became ulcerated, and the present fungus made its appearance. About a fortnight ago some "core" was removed from the centre. Since that time the fungus has increased considerably in size, and the induration at its base has been augmented. Prior to this he had little pain in the tumor, but afterwards it was severe, till relieved by a flow of matter from the centre of the ulceration.

Cat. Lini. Tr. Op. gtt. xxx. h. s. H. Sennæ, o. m.

Liq. Plumbi parti affect.

24th.—Liq. Amm. Acet. Mist. Camp. aa. 3vj. t. d.

On the 30th, the abscess discharging itself imperfectly through the wound in the groin, an incision was made in it to-day, midway between the anterior superior spinous process of the ilium and the umbilicus. Considerable hæmorrhage followed. Soap and opium pill was given, and on the 3d May the discharge was becoming healthy, but he complained of indigestion. On the 8th he was ordered

Infus. Ros. c. Mag. Sulph. 3j. v. d.

11th.—R. Sulphur. Præcip. 3j. Arsenici Albi 3ij. M. Appl. fungo.

23d.—Arsenici Oxyd. Alb. 3j. Ung. Sulphur. 3j. M. Appl. ibidem.

On the 29th this was changed for Plumb. Superac. 5ij. Cerat. Cetacei 3ij. M.

Very little alteration took place, and on the 2d June the patient left the hospital for his native place, Hounslow, at his own desire. At this time there was general tumefaction round the fungus, with partial erythematous patches on the skin; the fungus itself was rather larger, more painful, and more glassy on its surface, with darker and fouler parts here and there. The wound above the fungus was in an irritable, indolent

state, with glairy secretion, and a glassy surface.

CASE II.—*Cancerous Sore in the Scrotum of a Chimney-Sweeper—Implication of the Tunica Vaginalis Testis—Enlarged Glands in the Groin—Operation—Cure.*

Edward Child, æt. 37, admitted June 23, 1830, under the care of Mr. Keate.

Is a native of Watford, and has been a chimney-sweeper for thirty years.

At the lower part and right side of the scrotum, its centre being situated nearly over the extremity of the right testicle, is a cancerous looking ulceration, three inches in diameter from side to side to side, and $1\frac{1}{2}$ from before backwards. Its surface is reddish in some parts, sloughy looking, and yellow in others; studded with round warty protuberances or granulations; the edges elevated and welted, inverted in some parts, but not in others; the discharge sanious and rather offensive. There is some, but not great surrounding induration, and the remainder of the scrotum appears healthy. The right testis is wasted, and its extremity adheres apparently to the base of the sore; the left testis quite free; the cord unaffected. The glands below Poupart's ligament in either groin, especially the right, are rather enlarged. A good deal of pain, and some tenderness in the sore, but none elsewhere. Appearance robust; health good.

Twelve months ago a wart first formed upon the scrotum; it grew larger, and "ran to seed." In this way it went on, now getting larger, then in part dropping off, and then again growing, until six months ago, when it first formed a sore. From that time to this the latter has gone on increasing in size, with occasionally slight hæmorrhage from it. The glands have been enlarged for about a month. He has done nothing for the complaint, and worked to the present time. His father had the same disease, for which he underwent three operations, and lived to the age of 89.

Pil. Hyd. Sub. c. gr. v. o. n.

Dec. Sarsæ. c. oj. quotidie.

Sp. Vin. Rect. ʒiv. Aq. Distill. ʒij. Pot. Hydriod. ʒj. M. ft. lotio.

On the 28th he was rather feverish, and was ordered salines with antimony. On the 1st July the disease was removed by the knife. The tunica vaginalis of the testis being adherent to the sore, was abstracted with it, and the testis also, though the latter was healthy. After the operation he required the introduction of the catheter, but no unfavourable symptom followed; and on the 30th July he was discharged cured. As we were prevented from seeing the patient after the first week of his admission, we cannot speak to the state of the glands in the groin

on his departure. We are assured that the enlargement had totally disappeared.

CASE III.—Warty Sore in Left Groin of a Chimney-sweeper—Enlarged Iliac Glands—Employment of Iodine—Cicatrization of the Sore.

James Thomas, æt. 11, admitted July 28, 1830, under Mr. Brodie.

Has been a chimney-sweeper six years.

At the fold between the left thigh and belly, about an inch below Poupart's ligament, is a warty growth on the skin, extending from an inch of the outer margin of the thigh to near the junction of the thigh and perineum; its breadth from above downwards not above an inch at the centre, which is its broadest part. In the middle of the warty growth, which is little elevated, is a superficial and small ulceration. The ulcer is not foul, yet of indolent appearance; here a sloughy, yellowish looking spot, and there a more florid granulation. Around this morbid growth are a few small, separate, cuticular warts. He has no pain in the part, nor elsewhere; the sore is not tender when handled; exercise is not prevented; the health is good.

Just above the warty growth are several enlarged inguinal glands, not inflamed nor tender. Deeper in the iliac fossa is an oblong, slightly moveable tumor of some extent, an enlargement, no doubt, of the absorbent glands on the outside of the femoral vessels.

At the latter end of April last a "little lump," about the size of a bean, formed in the site of the present sore; it was poulticed and opened; only blood issued. The poultice was continued, the sore increased, and at last it assumed its present appearance. He describes the nucleus of the disease as beneath the skin, and not a wart, yet not exactly a gland. He has continued at his occupation to the present time.

Cat. lini. Recumbent posture.

Aug. 6th.—R Liq. Potass. ℥j. Aq. Cinn. ℥ijj. Aq. Dist. ℥iv. M. sumat. part. 3tiām t. d.

14th.—Little benefit.

R. Tinct. Iodinæ gtt. v. Aq. Cinnam. Aq. Distill. aa. ℥ss. t. d.

Sept. 3.—Tr. Iodinæ gtt. vj. t. d.

18th.—Tr. Iodin. gtt. x. t. d.

24th.—Has got very fat under the iodine. The sore has improved, but is still very indolent. The health is good. On the 1st Nov. the iodine was omitted, and on the 6th it was resumed. On the 10th the sore had healed, but there was still much warty puckering and induration in the groin, with an elevated linear cicatrix in the fold. The enlarged glands still remain (Dec. 6th). The health is excellent.

We suppose that the foregoing cases will be received as examples of the cancer to which chimney-sweepers are subject. If their history and progress do not tally in all respects with the descriptions given to the world by authors, this does not, we imagine, decide that they were not instances of the disease in question, but rather that those descriptions are more limited and exclusive than nature will permit. The disease does not always commence in the scrotum—that is certain. The term "cancer scroti" is therefore improper. Sir Astley Cooper and Mr. Keate have seen it on the face; Sir James Earle saw it on the wrist; and here we have it in the groin*. Where the sore lies, there may be the cancer. The chimney-sweeper's cancer is not always the intractable disease which Mr. Pott described. Our second patient's father had three operations performed upon him, and lived to the good old age of 89. Our third patient suffers little in health or in spirits; he joins the other boys in their sports, and is as active and lusty as the best of them. Even fungus hæmatodos is not always rapidly fatal; neither is the cancer of chimney-sweepers uniformly inveterate. We should rather say that the degrees of its malignancy differ. Mr. Earle, we believe, has remarked that moderate glandular enlargement should not be a bar to operation; and he cites one or more cases in which it proved successful, although the glands in the groin were affected. In the second case here detailed, the enlargement of the inguinal glands subsided after the excision of the scrotal sore. But our object is not to make any extended observations on the complaint. We may refer our readers to a paper on the subject by Sir Astley Cooper, in his splendid work on the Diseases of the Testis.

* The late Mr. Rose had a patient at the St. James's Infirmary, in whom a sore, resembling in many respects the cancer of chimney-sweepers, occurred upon the nose, and ulcerated through the bones into the nasal cavity. The patient was a chimney-sweeper, about fifteen years of age. The sore was cured by arsenic, given, we believe, internally, and applied externally in the form of paste.

NOTICES.

Dr. Rigby's paper is delayed on account of a cut which is required for it.

Dr. Pritchard's communication next week. Mr. E. has our best thanks.

Dr. Elliotson did not deliver a clinical lecture last week.

ERRATA.

In Dr. Lee's paper in our present Number, p. 385, for "Gardieu," read "Gardien;" and for "balottement" in pp. 386 and 388, read "ballottement."

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

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SATURDAY, JANUARY 1, 1831.

CLINICAL LECTURE,

DELIVERED BY DR. ELLIOTSON,

December 20, 1830.

*Diseases of the Heart—Diseases of the Skin—
Anamia—Gout—Diarrhœa—Lumbago—
Epilepsy—Itch, &c. &c.*

I HAVE before me, gentlemen, a diseased heart, which was not taken from a patient in the hospital, but presented to me the other day by a medical friend who attended the patient.

This is a case of the most extensive excrescences I have yet seen from the valves of this organ. The one I shewed you the other day was the most extensive instance of the affection I had then seen, but this surpasses it. I have not seen any representation equal to it in any plate, nor have I seen any thing like it in any museum. Before I enter into a description of the case, I will shew round the organ. This is the left ventricle laid open; these are the three aortic valves, and here is the mitral valve. The valves of the aorta and the mitral valve are, you know, continuous, and the excrescences are upon both—upon that portion of the outside of the mitral valve which is nearest to the semilunar valves of the aorta—we might say, upon part of the root of the mitral valve. One of the excrescences upon this part is of a most extraordinary length—so long as to reach considerably more than half way towards the apex of the ventricle. You see some upon all the aortic valves, but the great mass of them is upon the external part of the ring of the mitral valve, nearest to the valves of the aorta.

I had an opportunity, through the kindness of the gentleman who gave me this specimen, of listening to the symptoms in the man from whom it was taken, twice—once in July, and once a month before his death, which happened about ten days ago. He

complained of a shortness of breath, and of debility, and he himself discovered that he had a peculiar sound in his heart before any practitioner had attended him. The sound which his heart made was exactly like that of a pigeon cooing, so that on standing a foot from the patient you might hear it quite distinctly. This sound I examined very accurately, and it took place after the pulse. First of all there was the stroke of his heart, and at the same moment his pulse, but sometimes there was the most minute interval possible between them, so that the stroke of the heart was followed instantaneously, all but accompanied, by the pulse at the wrist; and sometimes they were observed to be quite simultaneous; and after the pulse was clearly over, then came this cooing sound; after which there was a dead pause; and then the stroke of the heart and the pulse began, followed by the cooing, and this by the pause again. Laennec believes that the auricle contracts after the ventricle. I was quite certain that there was an impediment in the man's heart, and I was certain that it was in the left side, because the sound was loudest under the left cartilages of the ribs: it might be heard all over, but it was loudest here; and as you came to the sternum and right cartilages, it grew weaker. Then I could not conceive that it arose from any obstruction at the mouth of the aorta, for this reason—that it took place after the heart had given its stroke; or if you choose to suppose that there might be an error in that respect, and object to this statement, I will say it took place after the pulse at the wrist—after the blood had been emitted from the ventricle. Another circumstance shews that it could not have arisen from the mouth of the aorta being obstructed;—the pulse was remarkably full; not such a pulse as you have when the blood is so obstructed in its course into the aorta as to give a very loud sound.

You cannot form a perfect idea of the state of things from the heart as you at present see it. These excrescences now look

flat, but at the time the body was opened they were full and plump: they have now been hardened by spirits, but before they were all plump, so that at their base they presented a cauliflower sort of appearance, from which a few very long shoots extended. The mass, which was so exceedingly full, solid, and plump, consisted of those excrescences which I now shew you, and they altogether formed a large body. There was thus a considerable mass pressing externally upon the mitral valve. You see that these excrescences are seated on the outside of the mitral valve, and there is apparently no obstruction in the valve itself, the opening being as large as natural; but when the heart, which is now laid open, was together and entire, this mass of excrescences must clearly have pressed very considerably down upon the mitral valve, and narrowed the auriculo-ventricular opening. I do not think that the excrescences upon the mouth of the aorta produced any obstruction whatever, for you will observe that the aorta is clearly enlarged; the excrescences must have been to a great extent in the way, but yet the valves are considerably larger than natural; they, and the tube of the aorta, were so dilated that the impediment that would have been afforded was obviated. You do not in any healthy heart see valves of these great dimensions. The mouth of the aorta is larger than it should be, and there is a full opening and a full passage, notwithstanding the excrescences, for the blood to escape from the left ventricle. But here was a great mass of solid matter exactly at the root of the mitral valve, and it appeared certain that these exerted considerable pressure, not on the margin of the valve, but exactly where the blood leaves the left auricle. The excrescences that produced the obstruction were external to the valve, but you know that when there is an obstruction in the mitral valve itself, this becomes indurated, and the opening into which I now pass my finger becomes a mere slit. It is quite certain that there was no obstruction at the mouth of the aorta, because the pulse was full, and the bellows-sound took place clearly after it.

You observe that the left ventricle is larger than it should be; it is dilated, and when the heart was first opened it was much thicker; now it is condensed by the spirit. The signs of hypertrophy were very clear. It had a strong action of the left ventricle—a very great impulse, without any alteration in the usual noise. When there is great thickening, without any dilatation, you have a diminution of sound; but when both occurrences take place in equal proportion, I believe you have much about the natural sound. Here the action was very great, raising the stethoscope and the head, and it was certain that he was labouring

under hypertrophy of the left ventricle, with dilatation.

I will now mention a case which proved fatal in the hospital since we last met, for the purpose of comparison with this, instead of introducing it in its regular order.

A woman was admitted, on the 2d Dec. into Mary's Ward, æt. 25: she had been ill five months. She laboured under disease of the heart, and consequent dropsy. In her case the symptoms were universal dropsy, difficulty of breathing, loud action of the ventricles, and a bellows sound at the apex of the heart in the situation of the left ventricle. These things frequently occur in persons as young as these were—the man being under thirty, and the woman under twenty-five; and they also generally occur in consequence of pericarditis, and pericarditis as the result or attendant of rheumatism. The man whose heart I have now shewn you had laboured under rheumatism, and that he had had pericarditis was indicated by a circumstance which I can now shew you—the deposition of thick fibrine upon the pericardium. This was strong presumption of former pericarditis. The woman had had rheumatism, but not to an intense degree. It was only on questioning her very minutely that I could discover that she had had rheumatism; but she said that she had had pains all over her—that she had had pains in her back and shoulders, and that her limbs had become stiff, hot, and swelled. She had clearly had acute rheumatism, but did not call it so; and I should have passed it over, had I not been aware that few young persons have disease of the heart without previous rheumatism, and indeed without previous pericarditis, and questioned her very minutely. After all these rheumatic symptoms had occurred, she began to swell first in the ankles, then higher up; her breath became short, and when she was admitted to the hospital she had general dropsy, a degree of feebleness and flabbiness of the whole body, and the heart beat to a greater extent than usual. There was a louder noise of the ventricles than usual, particularly I thought of the left, and at the apex there was a bellows sound. She had, of course, difficulty of breathing, and on striking over the region of the heart there was a dull sound to a very great extent.

I considered this woman as labouring under pericarditis, in some degree, as well as organic disease; for there was tenderness over the region of the heart. I found the chest universally tender on pressure, but particularly so over the region of the heart. Leeches were applied and colchicum given, and she was put on low diet. She became very cross and dissatisfied at having low diet, and said nothing of that weak kind would do for her, and she ought to have

meat, and wine or porter. I told her that it was not proper for her, but it made her so cross that she fell into a violent passion after I left the ward, and I was informed that she agitated herself to such an excess that pain in the region of the heart came on, which made Mr. Whitford, jun. apply sixteen leeches. In a few hours after this pain began she suddenly expired. I have no doubt that the woman died from mental emotion. When a person is labouring under disease of the heart, nothing is more dangerous than for them to suffer considerable emotion, of whatever kind.

On opening her, both ventricles were found dilated; the left so much so, that the apex had become excessively thin, and no doubt, if she had lived much longer, the heart would have burst at that spot. The bellows-sound in her case did not take place as it did in the man; it took place at the moment of the pulse. I see that I have entered, in the note which I made on her admission, loud action at the left ventricle, with a bellows-sound at the apex. The valves of the aorta were found considerably diseased. The specimen, I thought, was put away carefully, but unfortunately, I am afraid, it is lost—the man who was entrusted with it has lost it. It was a beautiful specimen, though much inferior to that which I have exhibited, and I should have felt great pleasure in comparing them together, because the bellows-sound was heard at two distinct times: in the man it took place immediately after the pulse, and was a cooing; in the woman at the time of the pulse, and was a blowing sound. In the woman no disease of other organs was found. The mouth of the aorta was not dilated in her, so as to make up for the obstruction, which arose from the excrescences of the valves. No excrescences grew upon the mitral valve, except a small portion at the margin, which, however, could clearly have not in the least interfered with the function. A large quantity of clear yellowish serum existed in the pericardium.

Impetigo and Eczema.

I now proceed, gentlemen, to take a hasty review of the cases which have been presented, but have not yet been spoken of in my lectures.

When I had the pleasure of meeting you this day fortnight, I had so much to say respecting some other cases of the preceding week, that I had no opportunity of giving you an account of the cases that had been presented the week before the lecture; these were ten in number—three among the women, and seven among the men.

Among the women two cases were presented of impetigo, and they were exceedingly interesting—not as illustrative of the disease, because it is so common that no one can be long without an opportunity of

serving it—but from the success of the treatment which was adopted, illustrating the success which generally follows a particular mode of treating the disease.

You are aware that impetigo is a pustular disease, that it is not contagious, and that it is characterized by those pustules which are called *psudracia*—that is to say, by small pustules very little raised. In porrigo the pustules are acuminated, and some of them, being pointed, they are called *achores*; or else they are large, and called *fari*, the scabs which are formed being full of little cells like the honey-comb. But in this disease, impetigo, the pustules are *psudracia*, small pustules, not pointed, and very little raised. The disease for the most part becomes chronic; and unless you adopt one particular sort of treatment it is often a very obstinate affection.

The girl of whom I am now about to speak was admitted with impetigo of her arms and various other parts of her body. I found that she had *headache*; that she was *heavy, drowsy*, sometimes *giddy*, and that her pulse was *full*; she was therefore bled in the arm, and the blood was *buffed and cupped*. The treatment consisted in putting her on low diet, bleeding her from time to time (the blood was always *buffy*, and sometimes *cupped*), and giving her mercury moderately. By perseverance in this treatment, and nothing more than this, the girl got so well that it was not worth while to keep her in the hospital any longer, and she was presented on the 2d December.

The case of a woman in the same ward was similar, only that the pustules were not so fully defined; their contents were in some measure watery, so that you had just as much reason to call it eczema as impetigo.

You know that in eczema there are not pustules but vesicles, and a considerable degree of inflammation around them, just as in impetigo; but the two diseases run into each other. There is one form of eczema so much like impetigo, that Dr. Willan, in his invaluable work (and we possess others more recent, which are also excellent), calls it *eczema impetiginodes*; but they are the same affection, with this only difference, that sometimes the contents are serous, and sometimes purulent.

The treatment, so far as I have observed, is exactly the same. This woman was put on low diet like the girl; she had been ill four months before her admission, without any improvement taking place; she was bled, and the blood was *buffed and cupped*; she was put on low diet, and mercury was given in small quantities, so as slightly to affect her mouth. She came in on the 11th November, and was presented all but well—so well that it would have been an absurdity to keep her in the house—on the 2d December. In her case there was heat of body, *headache, giddiness, and thirst*.

Now there is a great defect in many books written on diseases of the skin, in not pointing out that certain internal parts, or the constitution in this disease, is so frequently in an inflammatory state. The French seem to be aware of frequent internal affection; but they say it is always the stomach and intestines that are inflamed—that there is a gastro-enteritis, and this gives rise to the heat, nausea, oppression, and so forth. However, I am satisfied of the necessity of considering cutaneous diseases more pathologically than they frequently are viewed. It is highly proper to know their external character very minutely. This enables us to recognize and distinguish them, and to communicate our ideas to each other; but if we go no farther than the variety of their external character—if we merely speak of them as *naturalists*, dare I use the term, we shall form but a very indifferent conception of them; it is absolutely necessary to take a *pathological* view of them, and consider the whole state of the system. You will continually find that the affection is much more than *skin deep*—you will continually find, even when cutaneous affections have long been chronic, some signs of an inflammatory state of the system, particularly of the head. As far as I have been able to examine, the head much more frequently suffers than the abdomen. These two patients had no tenderness of the epigastrium, and in a very great number of cases you will not find signs of inflammation there, but you very frequently find the head disturbed; and even in those cases where the stomach and intestines are inflamed, you will find that the head also frequently suffers. I can only speak from what I observe; and certainly, in my practice in London, it is the head that suffers in these diseases, from an inflammatory condition internally, much more than any other part. However this may be, you will be surprised to see the blood buffed and cupped so frequently as it is. Often in lepra, psoriasis, impetigo, &c. of many months', and even of many years' duration, do I find the blood buffed and cupped. You will find, whatever treatment you adopt, and whatever good it may do, it will often ultimately fail in effecting a cure if you do not put the patient under anti-inflammatory treatment. I believe you will fail in this disease, as in epilepsy, with many excellent drugs, through the inflammatory state of the system not being sufficiently attended to. Farther, if you both bleed and purge, you will do little good, should you allow the patient diet the direct tendency of which is to counteract these measures. It is necessary to put the patient on moderate diet, to take off some of his stimuli—his wine, beer, spirits, sometimes his meat—and perhaps bleed him from time to time. The state of the skin would frequently not indicate bleeding, when the head-ache, drowsiness, and vertigo do; and a course of anti-

phlogistic treatment is often demanded in cutaneous diseases.

The French are quite aware of the necessity of bleeding in cutaneous diseases, but they bleed locally, by the application of leeches around the affected spots, or to the epigastrium; and though doubtless they do great good, yet you will find that bleeding at the arm is frequently necessary on account of the state of the head, and that answers every purpose. In many chronic diseases of the skin, where even no inflammatory signs appear in the head or abdomen, venesection at once lessens the redness, heat, and itching, and will soon cure the disease. Even the inflammatory state of the skin itself is scarcely attended to in some of the best books, or if implied, is not dwelt upon as important in many chronic cutaneous diseases: and when internal affection is mentioned, it is too frequently described as ceasing on the appearance of the eruption, or its true character is not minutely given, and post-mortem appearances are not described, even with respect to measles, scarlet fever, or small pox. Even so common and innocent a disease as urticaria is often imperfectly described; the inflammation and swelling of the tongue and fauces, occasionally such as cause great distress, are passed over; and necessarily the frequently cupped and buffy state of the blood, since venesection is not attended to, although, even when the disease has arisen from something swallowed, it presently causes the acute form to recede, frequently the same day—not unfrequently indeed while the blood is flowing, and the patient is thus saved many days of misery. All diseases of the skin, however, are not inflammatory, neither do they all require antiphlogistic treatment. They resemble dropsies, discharges from mucous membranes, and hæmorrhages, and most other diseases; some are inflammatory, and to be cured only by bleeding, purging, and low diet: some are attended by no inflammation, but debility, and require stimulants and tonics: some demand a middle course, consisting of moderate antiphlogistics, with tonics and stimulants; some, though inflammatory, have something more than inflammation, and cannot be cured by bleeding, while others are greatly influenced by specific or other peculiar drugs, and will yield to those only, though sometimes the more readily if antiphlogistics are also had recourse to. In this particular form of disease, impetigo, or eczema, which bears so strong a resemblance to it, when of an impetiginous character, that you may call it *eczematous impetigo*, you will find mercury of great use. In many cutaneous diseases mercury is of no service, but that is not the case in impetigo. When I have backed mercury by moderate bleeding and by moderate diet, I have generally found it answer an excellent purpose in this disease.

With respect to *local* applications, it is necessary to remember that stimulants are for the most part injurious. There is irritation enough of the skin already, and what you have to do is to soothe it. Frequently I have tried cold soft water, not pump or hard water, with the most beneficial results, and you will find it one of the best applications that can be employed. If you apply any thing else, I think starch or the oxyde of zinc answers very well. If the patient's skin be not irritated by grease, unguentum zinci is one of the best ointments you can resort to. Dilute solutions of the chlorides are sometimes beneficial. Although strict antiphlogistic remedies are so often indispensable in this and other cutaneous diseases, the opposite state of the system is continually seen, in which tonics and good living are demanded.

Amenorrhœa.

There was presented during the week one other woman, who laboured under amenorrhœa. It seemed to be an amenorrhœa arising from a deficiency of blood and of activity, and on that account I gave her steel, and she very soon got well enough to go out.

You are aware that the treatment of amenorrhœa must be very different in different circumstances. Sometimes it will occur from a fullness of the whole system and of the uterus; but in other cases it will occur from an opposite cause;—it will arise when the whole system is in a state of debility, when there is too little blood, and what there is, is of a watery character. In some cases it is best to open a vein or to apply cupping glasses to the loins, while in others the treatment must consist in furnishing the patient with strength and blood wherewith to menstruate.

This woman was æt. 22, and had been ill six months. She was admitted on the 13th of November. She was pale and excessively weak, and the case was one indicating the propriety of strengthening measures. She took two drachms of subcarbonate of iron three times a-day, and went out on the 2d of December. I met her in the street a day or two ago, looking perfectly well. A state analogous to that of this woman often occurs when the spleen is enlarged and indurated. Sometimes there is a disease which is peculiarly called *anæmia*; cases of which have been described by Dr. Combe, in the Edinburgh Medico-Chirurgical Transactions, and by the French. In all, the blood has been observed to be deficient both in tenacity and redness—whence the white-wax hue of the surface; and it is attended by debility, faintness, a very excitable pulse and respiration; in short, by all the effects observed after hæmorrhage, or after excessive loss of blood—as it comes to the same thing, whether the blood which is made is lost and supplied by an excess

of serum, or whether blood is generated of too serous a character. In France, the cases of anæmia occurred in persons who worked in a particular gallery of the coal-mines near Valenciennes. The affection, however, seen much more frequently, is that of young females, called *chlorosis*. But chlorosis may occur in males. I do not mean to say that males experience a want of menstruation, but a state of the whole system just the same as that of females in chlorosis, happens sometimes in males. In all these cases it has been shewn that iron is the best thing that can be employed. In the French cases, the whole of their treatment was unsuccessful till they exhibited iron, and these occurred twenty years ago. Mercury did serious injury. With respect to the anæmia with enlarged spleen, you will find great use from iron. This is particularly mentioned by Professor Tomassini, in his Clinical Reports. In chlorosis it is the best medicine that can be given. For the chronic state, following excessive loss of blood, it is one of the best remedies. These are all forms of anæmia, and in the chlorosis of this female it answered admirably.

Gout.

Among the men was presented a case of gout. The occurrence of such a case in the hospital is one of great rarity. While Sir Gilbert Blane was physician to this hospital, a period of ten years, he never had a case of gout; whereas in private practice he had nearly 150. This shews the great influence of our habits upon this disease. The poor people in this country never drink wine, but malt liquor and spirits; whereas the rich drink very little of the two latter, while they consume a great deal of the former. The poor drink enough beer and spirits to produce the gout, if those liquors had the property of causing it; and many have such sedentary occupations that we cannot say the power of these fluids is always counteracted by hard work. This is only the third case that I have seen here during the eight years that I have been physician to the in-patients of the hospital. When it has occurred in patients in St. Thomas's, I believe it has been referable either to poor people having been in particular situations, where they were able to procure wine, or from their having a strong natural, and often hereditary tendency. Many persons in the higher classes live the most abstemious lives, but they nevertheless have the gout. When the affection has hereditarily got into the system, it will take two or three generations before it can be eradicated. I have seen thin and abstemious persons labouring under gout, and they have been under the necessity of taking wine in moderate quantities, on account of the weakness of their constitution. This man laboured under acute gout of the

hands; they were greatly swollen, red and hot, and shining. It originally began in the great toe, and in the middle of the night. He had many fits, and they had long begun only in the night. He would go to bed well, and awake with violent pain, and the parts would be red, hot, and shining. He had now been subject to the disease for about five years, and suffers two or three attacks annually.

By the treatment adopted in this case, he soon got the better of the complaint. He was treated by *vinum colchici*, exactly as we give it in acute rheumatism; and as soon as it began to purge him he got well. He took half a drachm three times a-day. He was admitted on the 18th November, and presented on the 2d December. In two days the medicine began to purge him, and then he took it but twice a-day; and he went on well. He was 66 years of age, and had been subject to the complaint five years.

Miscellaneous Cases.

There was a man admitted on the 18th November, and presented on the 2d Dec. who laboured under gastritis and bronchitis. The symptoms were great tenderness of the stomach, with heat there and up the throat, sickness, and at the same time short respiration, with copious expectoration and sonorous rattle; all over the chest a sonorous rattle was heard. He got well in the usual way—simply by bleeding, starving, and giving a few doses of calomel.

In Jacob's ward four cases were presented: one a case of moderate pleuritis, which was easily cured; one case of continued fever, which was as easily got the better of. The other two cases were of some little interest.

The one was a case merely of diarrhoea, but when the man came into the house I examined his chest very carefully, or I might have supposed that he had disease of the lungs. On listening, his lungs proved sound. He said, however, that he had violent diarrhoea, and a cough, and his legs were swollen. It is common for patients to apply at the hospital with phthisis who never speak of expectoration or cough, but only of purging. This is sometimes done from artifice, as they know that we do not admit patients with phthisis, because we can do them no good. Others, however, suffer so much from the diarrhoea, it causes them so much trouble, that they forget the trouble of coughing and the difficulty of breathing; so that when patients come with swollen legs and purging, we are always very suspicious that they have phthisis. This man's pulse was quick—and so far he had some signs of phthisis, heat, diarrhoea, swelling of the legs; and he said he had cough, and some little expectoration. On examining the chest, however, the sound was perfectly healthy throughout, and I therefore concluded that,

by curing the diarrhoea, I should cure him altogether, and that his cough and expectoration were insignificant, and only mentioned from my questioning him closely as to their existence. This was effected in a simple manner, by simply giving him opium and good nourishment. The cough and expectoration I could never witness; and as he gained strength his legs ceased to swell.

Lumbago.

I admitted, at the same time, a case of lumbago of great violence, which was presently cured by what you will find often very appropriate treatment. The man was brought to the hospital unable either to sit or stand; he was supported by two persons, when I first saw him, on the edge of a bench, and he was drawn so much back from the violence of the pain, that, at first sight, he appeared to be labouring under *opisthotonos*—to be in a state of tetanus. His face was expressive of the most violent agony; his features were contracted, and he roared out with pain. He was drawn back so much that I thought it right to ascertain instantly whether there was any tetanic affection. I found there was no affection of the lower jaw—a symptom which is usually present when tetanus exists in any part of the body. I looked at his hands and his feet, and I found no injury there. Upon further inquiry, I found that he sweated profusely. To ascertain whether the case was one of nephritis, I asked if he had pain in the course of the ureters, and down the inside of the thighs; if he had retraction of the testicle, or if he had a frequent desire to make water; and if the pain was confined to one side of his body, and if he vomited: to all these things he answered in the negative. There was no reason to suppose that he had nephritis. The case negatively, therefore, appeared acute lumbago—acute rheumatism of the loins; and there was tenderness over all the loins, and profuse sweating, exactly as in acute rheumatism of any part.

In acute lumbago, the heat of the body is sometimes very great, and the pulse very quick: I have seen the one 108°, and the other 160. He was instantly cupped over the part to a pint; he had three grains of opium, and then half a drachm of *vinum colchici*, and the latter was repeated every eight hours. He was instantly relieved, and on the second day able to sit up, and on the 2d Dec. he was presented perfectly well, having been well six days, but I thought it right to keep him in the hospital, lest there should be a return of the complaint from his catching cold.

This is a description of a case to which you may be frequently called; and if only trifling measures are resorted to, it may run on for a considerable time; whereas, you produce great comfort to the patient, and may gain considerable credit by using active

measures. If I had only taken six or eight ounces of blood from his back, or given him a few grains of Dover's powder, it would have done him no good; but, from his general strength and his age, it made no difference whether he lost a pint of blood or not. He was shortly after able to walk about, and he was very grateful for the good done to him. The treatment was simple, but successful, from making a correct diagnosis, and then putting the simple means which were required into full force. So much, therefore, for what I should have said a fortnight ago.

If I had had the pleasure of meeting you last Monday, I should have had to report the admission of six cases during the preceding week.

Epilepsy.

Among the women was a case of dilatation of the heart, and disease of the aortic valves, of which I have spoken, and a case of epilepsy. Among the men another case of epilepsy—a very curious case, in which the fits were preceded by a peculiar sensation, commencing in the foot, running up the leg, reaching the epigastrium, and then followed by a fit—a case of chronic bronchitis, and chronic inflammation of the windpipe and larynx—and a very curious case of spasmodic cough.

With respect to the case of epilepsy, you know that epilepsy is sometimes preceded by a peculiar sensation, generally as if an insect were crawling along the skin. You cannot trace it in the course of any particular nerve; it seems rather to be a sensation in the skin. Sometimes it has its origin from some cause in the part where it arises, but in other cases the cause appears to be in the head. There was an instance mentioned by Dr. Curry, at Guy's Hospital, of this aura, as it is called, rising from the extremities, where, after death, a little tumor was found in the head. Now in this man the circumstances are similar. He had pitched on the front of the head, and in consequence of that, there had been first, the usual symptoms of concussion; after that, violent pains of the head had lasted for some time, and to them was added epilepsy, and the fits have been always preceded by this peculiar sensation of trickling or creeping about the root of the great toe. It then runs along the inner part of the foot, behind the inner ankle, along the leg inside the knee, then inside the thigh, and as soon as it gets to the epigastrium, he falls down. The case is attended with violent pain of the head, and violent vomiting. We must suppose that a chronic organic disease is set up; at any rate there is an inflammatory state of the head. The man is much better, though I doubt whether he will be cured even by rigid antiphlogistic means.

During the week there were six cases disposed of; four cases went out of the hospital, and two patients died.

Spasmodic Affection of the Hand and Foot.

One patient who went out of the hospital was a woman, to whose case I directed your attention at the time of admission. Her disease consisted of spasm of one hand and one foot. I mentioned that the woman was brought in with her hand and foot completely turned in. I stated that this was an occurrence that we sometimes see during and after continued fever; and I also stated that I found she had extreme tenderness at the nape of the neck, with pain there and at the occiput. The disease I considered to be, in a great measure, irritation of the nerves which supply the muscles of extension of the right extremities. I told you that I should probably cure her, as the disease was recent, by applying antiphlogistic measures to the back of the head: this was the case. She was well bled at the back of the head and neck. I ordered her to be leeches every day; a large number of leeches to be applied there, after one cupping to the amount of a pint. The first bleeding caused her hand to become straight. Two grains of calomel were given twice a-day till her mouth became affected, and twenty leeches were daily applied to the occiput from the 11th to the 23d November: by that time she was much improved. Some domestic calamity, however, happened, and the poor woman was obliged to go home. She felt very grateful for the benefit she had received. She had suffered violent pain from tension, as the foot had been bent in so much. The pain was gone off; there was a diminution of the contraction, and she was really approaching to a cure very rapidly; and I dare say that by this time she would have been well, but for the unfortunate circumstance of her being obliged to go home, and look after some of her family.

Itch.

There was a case presented, of which I spoke at the time of the patient's admission, of pustular itch. You are aware that the itch often puts on a form which nearly disguises it; it is accompanied by large pustules, which are called *phlyzacia*—large pustules, with a hard base, more or less inflamed, and well distended with pus. Now the itch is sometimes of this highly inflammatory nature, so that what would be vesicles, from the violence of the inflammation become pustules; but you will generally, in these cases, ascertain the true nature of the disease by observing that these pustules beset the hands and wrists most particularly, the feet and ankles; and then, in the most usual situations of itch, the roots of the thumbs and great toes, between the fingers, the wrist, and in the axilla, you find minute vesicles, little elevations with watery heads, some with a black speck on their summit, and all the vesicles and pustules are attended by violent itching—not by the tingling of nettle rash, but by violent itching. It is

necessary to observe, that in all cutaneous diseases, if you carefully look all over the body, you will somewhere find the disease in its true and real character. In this man there were these large pustules, but between these there were small vesicles with watery heads; some of them had lost their heads from his scratching, and become black points: the itching was extreme. There were some upon his breast, and none upon his face. I employed as a local application sulphur ointment, and he was soon cured. But after the essence of the disease had been got the better of, four or five pustules were left, and it appeared clear to me that these continued from the friction that was being employed, and that they would not get well if the mechanical irritation were continued. By employing a simple dressing of the same ointment, and allowing no friction, they speedily healed. He had a little ulceration of the leg, but it was not of a specific character, having been excited by his stocking, and it soon got well. There is one peculiar circumstance in itch; I never saw it attack the face. When a person is labouring under itch, he may have an eruption of the face just the same as other people. You may see a little acne on the face, or ten thousand things may be observed there, but the true itch must very rarely affect the face, as I never saw an instance of it there.

There were two other cases presented, one of which was rheumatism with coldness, and for which stimulating remedies were employed. The man got clothed by the Lord Mayor, and he speedily left the hospital.

Nervous Palpitation.

The other was a case of nervous palpitation of the heart. You will continually be consulted by persons for mere nervous palpitation—functional disturbance of the organ. In this case the palpitation arose from nervousness. You will find the heart beating more quickly than natural, and with a louder sound, but you will not observe a greater action at one part than another, nor will the sound appear loudest in any particular situation. The whole of the heart appears to be in a state of morbid irritability, and the consequence is, that every part acts more than it should. In organic disease of the heart there perhaps is one part acting more than the other—one ventricle, one auricle; or if the disease be excessive you may have both ventricles, or an auricle and a ventricle, and an auricle and both ventricles, in a state of morbid action, acting with morbid force or sound; but it is very rare to meet with this circumstance occurring at every part of the heart. In organic disease, if you have hypertrophy, the sound is lessened though the force is increased; and if the part is dilated, you find not only a local increase of sound, but frequently a dead sound on percussion,

showing that there is too much solid in the chest; frequently a preternatural sound is heard in the heart, from obstruction to the blood. But in this patient there was no preternatural sound, no deficiency of sound; the action was not more violent at one particular part. It is by these negative circumstances that you will ascertain the true nature of the disease, as well as by the absence of pulmonary affection and dropsy. You may be quite right in saying that the case is one of nervous irritation, and yet the person after a time may have organic disease of the heart; because when the heart has been labouring under disease of morbid irritability for a length of time, it is very possible for one part to give in, and have organic disease set up. This man had pricking pains over the heart, which are a common symptom in nervous palpitation of that organ. There is nothing dangerous in this particular symptom, but the pricking pains are sometimes excessively troublesome. That this has not any thing to do with organic disease of the heart I am quite certain, because I have noticed it over and over again in persons many years ago, who are now perfectly well.

The treatment in the case of this man consisted in the local application of leeches over the region of the heart, in keeping him very quiet, and in keeping his bowels open. Upon this very simple plan he very speedily got so much better that it was not worth while for him to stay in the hospital.

During the past week two other deaths have occurred. The one was from phthisis, chronic peripneumony, and chronic pleuritis, in a man; the other in a woman, from epilepsy, but whom I never saw. She was admitted one day after my visit, and it was represented that she had had a fit of epilepsy in the street; that she had been insensible, had been convulsed, had foamed at the mouth, and bitten her tongue. After being put to bed she came to herself, and was sitting up, nothing having been given to her but a dose of aperient medicine, and she said that she then had nothing the matter with her. While, however, she was sitting up in bed, she fell back, I understand, and died.

On opening the body, the crista galli of the ethmoid bone was carious, and the dura mater, where it was attached to this part, was become of great thickness and hardness. The corresponding part of the brain on one side, that is, the inferior part of the anterior lobe on one side was thoroughly softened. Her history was not known, and I cannot tell whether she had had epileptic fits before. It appeared that there was no paralysis, for she talked and moved her extremities very well, and did not complain of any thing, after the fit was over. The softening of the brain most probably had taken place in conse-

quence of the disease of the dura mater and the ethmoid bone. I presume the part of the brain next the diseased membrane and bone had become diseased first, because when I have seen caries of the temporal bone, which I have more than once in disease of the ear, the brain which was nearest to it likewise became diseased.

With respect to the cause of sudden death, the left ventricle of the heart was not found empty as is usual, but filled with blood; it was not contracted at the time of death, and it is probable that the heart suddenly ceased to act. There was no disease whatever found in the heart. I presume this must have been a sympathetic effect; that the state of the brain must have operated upon the heart, and caused it suddenly to stop.

With respect, gentlemen, to the last week, five patients were admitted, one woman with an inflammatory affection of the head—slight phrenitis, and two with rheumatism; and one man with rheumatism, and one with slight erysipelas of the face. No cases were discharged, but two patients died. The one was the woman with diseased heart, of whom I spoke at the beginning of the lecture; the other was a man with bronchitis and some degree of hypertrophy of the left ventricle. He was much better after free loss of blood and mercurializing, and was sitting up in bed, when he suddenly fell back and died. The cause of his death appeared to be sudden effusion of blood into the bronchiae, for just below the division of the trachea a quantity of coagulated blood was discovered.

ON THE

TREATMENT OF HEMIPLEGIA,

AND

Particularly on an important Remedy in some Diseases of the Brain.

By J. C. PRICHARD, M.D.

Physician to the Bristol Infirmary and St. Peter's Hospital.

It is obviously the duty of those medical men who have extensive opportunities of hospital practice, to make the public acquainted with facts falling from time to time under their notice, which may be the occasion of suggesting efficacious remedies, and of extending in some degree our very limited resources for the mitigation of human suffering. This consideration has impressed itself on my mind for some time past in regard to a remedy which,

during several years, I have been in the habit of prescribing in the treatment of diseases in the brain, and which an ample series of observations has proved to be a measure of very considerable value. I have at length resolved to take the earliest opportunity of calling the attention of medical practitioners to the subject, and I feel a strong conviction that those who shall give the method I propose a sufficient trial, will not be disappointed in the result. The remedy which I shall describe, though, as I believe, seldom or never used in practice, is no new invention, nor is it my purpose or wish to claim the merit of a discovery. Accident made me acquainted with its efficacy, and every trial made of it in cases of the appropriate kind has tended to confirm the opinion which I was at first led to form.

It has been principally in cases of hemiplegia, and in the most severe and intractable ones, that I have found this remedy efficacious; but it is also of no small value in a variety of other diseases affecting the functions of the brain. I believe it to be applicable to all those disorders which are attended with stupor or a tendency to coma, and perhaps to all affections which depend either wholly or in part on increased action or increased fullness in the vessels of the encephalon.

In order to give my readers an accurate idea of the description of cases in which this remedy is likely to be used with the greatest advantage, I must lay before them some account of the circumstances under which it has been tried, and of the mode in which the cases of hemiplegia that have fallen under my care have been treated previously to its adoption. In this method there is nothing peculiar to my own practice, but the description of it will shew that the more ordinary means have not been neglected, and that the particular measure to be recommended was available on the failure of them.

In recent cases of hemiplegia, as well as in those of longer standing, in which the same measures have not been employed, and in which they have appeared admissible, it has been my custom to prescribe the various means of reducing plethora, and to carry the use of them as far, in almost every instance, as the strength of the patient seemed capable of bearing without incurring any degree of injury. Venesections and purgative

medicines have been ordered not once or twice, when any urgent symptom threatened the extinction of life in the patient by a fresh attack of paralysis, but systematically, with a view of altering or reversing the state of constitution from which the disease had its origin. The measure and limit to the use of such means has not been *the least* that was admissible, and merely what the exigency of the moment absolutely required, but the most that could be borne without incurring risk of exhausting the patient in a degree incompatible with recovery. From repeated and attentive observation I can say confidently, that of patients labouring under recent hemiplegia, those individuals recover more perfectly, and are the least liable to renewed attacks, who have been bled and purged most at the beginning. From adults not far advanced in age, I have ordered about 16 ounces of blood to be taken, three, four, or five successive times. At the same period they have generally been purged with calomel and extract of colocynth, followed by doses of infusum sennæ with sulphate of magnesia, which have been taken two or three times in a day, and continued till some irritation of the bowels appeared to require a temporary remission of their use. The head has generally been shaved, and kept cool by the application of cold water, when heat of the scalp has pointed out its use, and when this has subsided, blisters have been repeatedly applied, either to the head or the nape of the neck. Local detraction of blood, by cupping or by leeches, has not been neglected, and the latter have been repeatedly applied where there has been much pain in the head.

In a great proportion of the cases of hemiplegia, the symptoms of disease are soon reduced under the use of the measures above described, sensation and the power of voluntary movement is gradually recovered in the affected limbs, and the patient requires little more to be done, in order to guide him to a slow and often incomplete recovery, than the occasional repetition of similar means, the daily use of fluid laxative medicines, and perseverance in low diet. If the progress towards a convalescent state has been slower than under such circumstances was to be expected, I have frequently observed it to be quickened by a gentle mercurial course, and those

patients in whom a slight degree of ptyalism has been produced, have almost uniformly appeared to me to derive material benefit from it, and their recovery has been more complete than that of others, in whose cases the same remedy has either not been used, or has not been administered to the same extent. Setons have been frequently applied in the neck, both as a measure for promoting recovery and for preventing a renewed attack, and many patients have been induced to retain them for a considerable time after they had become convalescent.

The method of treatment above described has been successful in the majority of paralytic cases which have fallen under my observation; and I believe that the curative means which I have pointed out comprise nearly all those which are generally acted upon, or which cases of the most ordinary description appear either to require or admit. It is only in those examples of the disease which are of a more intractable kind that an additional remedy seems to be called for, or is likely to be of any service.

Every practitioner who has had extensive experience must have met with cases of hemiplegia in which, after the ordinary measures had been used—after the plethoric state of the system, if such a state existed, had been reduced by general evacuations—and after a full and repeated trial of various topical remedies, the patient has obtained no material advantage; stupor and a disposition to a comatose state has remained, sensibility has not been restored, and even the muscular actions most important to physical life continue to be performed with difficulty; and that difficulty increases, rather than lessens. In other instances the evacuating remedies have partially succeeded, but only so far as to occasion a temporary abatement of the worst symptoms; and there has been a strong tendency to the recurrence of them; while the antiphlogistic means have no longer been available, having been already carried as far as the strength of the patient would admit. It has been chiefly under the circumstances now described that I have found advantage to arise from the remedy which I have undertaken to recommend.

I have long been aware of the value of issues in the scalp, formed by the

application of caustic, in disorders of the head; and I know that they have been prescribed many years ago, with striking advantage, by Dr. Bernard, of Clifton, in cases threatening hydrocephalus, and bearing the characteristic form of that disease. At one time I had adopted this practice, but found reason to change the use of caustic for an incision, which I have subsequently found to be much more manageable and more effectual. The first case in which I witnessed the use of the latter remedy, was that of a girl, about ten years old, in the Bristol Infirmary, who was labouring under the symptoms of hydrocephalus. The ordinary means had been tried without success, and the patient was screaming violently when Mr. W. Swayne, the late apothecary of the Infirmary, was visiting the ward. Mr. Swayne divided the scalp by an incision from the summit of the forehead towards the occiput. The bleeding which ensued seemed to afford relief, and the incision having been filled with peas, and converted into a suppurative issue, which discharged freely, all the symptoms abated and the child recovered. She returned some months afterwards into the Infirmary, under an attack of disease similar to the former, and she became my patient. As I was reluctant to prescribe at once what then appeared to me to be a severe and painful remedy, I tried first all the usual means of treating cases of hydrocephalus; and when all these failed entirely of producing any relief, I ordered an incision to be again made in the scalp. The result was as before, and the patient was again discharged perfectly convalescent. I have subsequently followed the same method in cases of a similar description, and in several instances with equally marked success; and this has particularly been observed when the same remedy has been tried in cases of stupor, or coma, occurring in the course of severe typhoid fever, and in which the patients appeared to be sinking. In no other disease, however, has the issue in the scalp appeared to be so generally productive of decided benefit as in cases of hemiplegia, and under the circumstances which I have before described. I made the first trial of it, in that disease, at a time when I had three severe cases admitted during the same week. In two of them the disorder assumed nearly the form which

has been alluded to: and in both of them the issue in the scalp seemed to be the immediate instrument, as it certainly was the immediate precursor, of a speedy recovery, though the general tenor of symptoms had strongly portended a very different event. In the third case the issue was not prescribed, and the patient left the Infirmary without having experienced much relief, though the usual remedies were tried.

I have at this time a patient under my care at the Infirmary, who was attacked about five months ago by a severe hemiplegia, affecting the right side. He was admitted a few days after the commencement of his disease. His appearance indicated that the brain had sustained some considerable injury in the attack; his muscular power was almost destroyed in the affected side; his speech was very inarticulate, and he laboured under a great degree of stupor. The treatment which I have above described as the previous and ordinary course, was adopted in this case. Doses of strychnine were also given to him, and increased as far as it appeared safe to increase them. The patient derived no benefit from any of these means, or at most only a temporary relief of stupor from bleeding and blistering; he had frequent threatenings of a fresh attack. The comatose disposition at various times increased, with a more inarticulate speech, and a greater distortion of the face, and every thing in the case portended a fatal termination. An incision was made in his scalp about four weeks ago, which still discharges freely, being regularly filled with peas. The patient has improved from that time without interruption. From being scarcely conscious, and unable to move the limbs of the affected side, he is now so far recovered as to walk about the ward by himself without difficulty, and his strength appears to increase from day to day. The improvement in his state is ascribed by himself, and by all those who have witnessed it, to the issue in his scalp.

I have by no means been inattentive to the advantage which is to be obtained from setons in the neck in a variety of cases of palsy, and other diseases having their seat in the brain; and I am in the habit of prescribing them when it seems to be important that the remedy should be long retained; but I am confident that issues in the scalp are incomparably more efficacious, and therefore,

in cases of imminent danger to life, greatly preferable. In believing that they do not, on the whole, occasion more suffering than setons, I am confirmed by the opinion of Mr. Morgan, the house-surgeon and apothecary to the infirmary, who is a most judicious and attentive practitioner, and who has had the best opportunities of forming a correct judgment upon this point.

If any practitioner should be desirous of trying this remedy in consequence of my recommendation, I would advise him to make the incision completely through the scalp for the length of four or five inches over the sagittal suture, and to separate the edges of the wound by a row of peas.

TRAUMATIC TETANUS SUCCESS-
FULLY TREATED WITH TURPEN-
TINE.

*To the Editor of the London Medical
Gazette.*

Sir,

As traumatic tetanus is a most fatal disease in this country, I trust that the following minutes of a case, which had a favourable termination, may not prove uninteresting to your readers.

I am, Sir,

Your obedient servant,
JAMES GIBBON, M.D.

Swansea, Dec. 16th, 1830.

Miss W. of this town, æt. 40, of a full, florid, and very healthy habit, but of rather lax fibre, whilst at Ilfracombe on the 27th of October last, received a wound on the palm of the left hand. It was occasioned by her falling upon the edge of a slate, placed perpendicularly in a garden-walk. The wound was, therefore, of a lacerated character. The fascia palmaris was laid bare, but the flexor tendons were not much injured. There was a moderate hæmorrhage, and the wound, after being washed, was sewn up, with two stitches, by a surgeon upon the spot. The edges of the torn flap of skin sloughed, but the wound shewed altogether a favourable appearance, and little attention was paid to it after her return to Swansea in the beginning of November. On the 7th of that month she complained of pain and difficulty in swallowing, fulness of the throat, and some rigidity of the jaw,

which symptoms were at first regarded as catarrhal. Topical bleeding, by leeches, was advised; fomentations and saline purgatives were also had recourse to, but with no relief to the symptoms.

On the 10th, tetanus was clearly indicated by violent cramps of the left side of the body, with a disposition to permanent spasm of the flexor muscles of the left forearm, drawing the fingers most forcibly over the wound. The trismus increased, but not to the degree of preventing the introduction of fluids into the mouth. At this time there was great general uneasiness and distress; the slightest attempt at motion caused an increase of spasm to a degree that might be termed convulsive. The pulse had been gradually increasing: it was now 120; the thirst was urgent; a distressing sensation of coldness was felt about the præcordia, with occasional palpitations. There was also a slight degree of emprosthotonos, for upon every attempt to lie quite down in the bed, the patient started up into a semi-recumbent posture. The bowels had been very freely relieved on the 9th inst. and continued open during the evening; a draught was given at night, with tr. opii gtt. xxx.: opiate frictions were used to the extremities, along the spine, and around the throat. The left hand was enveloped in a large emollient poultice. Under the influence of this treatment she experienced slight relief, slept a little at intervals, and the pulse fell a few beats in the minute.

On the 10th the opiate frictions were continued. The anodyne draught and hydrargyri sub. mur. gr. vj. mixed with honey, were given at bed-time.

On the 11th she was worse, having passed a restless night: the spasms were very severe, though principally confined to the left side of the body. There was great uneasiness at the scrobiculus cordis, to which part she referred the source of the spasms. She lay half recumbent, with her knees drawn upward. Pulse 130. What could be seen of the tongue was livid, and very much coated, for the jaws could only be separated to the extent of about a quarter of an inch. No motion since the night of the 9th.

At this time I first saw her, as she had hitherto only been under the care of Mr. Nicol, a very intelligent surgeon of this town. We found her in a most alarming state. The pulse was small, rapid,

and variable. There was a disposition to colliquative perspirations, which, at times, were profuse. The left hand and fore arm were firmly bent. At any attempt to relax the contracted muscles of the upper or lower extremity of the left side, or to move the body in the slightest degree, most violent and distressing general spasms came on. This distress was accompanied with alternations of much heat and cold "about the heart," to use her own words, which feelings occasioned more fear in herself than any of the other unpromising appearances. Whenever these spasmodic attacks were present, or any attempt was made to move the body out of the contracted position in which she lay, a degree of anxiety, amounting to horror, was depicted in her countenance. The urine was scanty, and the inconveniences connected with discharges from the bladder and rectum were great.

From the well known failure of our most powerful remedies in similar cases, I thought that this would justify the trial of the *ol. terebinthinæ*, from which I have often found great benefit in severe spasmodic diseases, more particularly in the *colica pictonum*. With this view we directed an embrocation of the *ol. terebinth. rectific. with tr. opii aa. p. æq.* to be frequently and well rubbed over the greater part of the body, principally, of course, where the spasms and contractions were most felt. A considerable portion also of this liniment was mixed with the poultices, and applied to the hand.

An injection, composed of *ol. terebinth. ʒij. ol. olivæ ʒj. and gruel*, was administered about three times in the day. The *hydrargyri sub-mur. gr. vj.* mixed with honey, was ordered to be continued every six hours.

The last medicine was directed as an aperient, and from the evacuations having had an unhealthy aspect. Sensible relief followed the administration of each turpentine injection, and there likewise appeared to be a slight mitigation of sufferings from the use of the liniment. Nevertheless, the alarming symptoms continued, or rather frequently recurred, in full force during the night. The patient was so convinced of the benefit derived from the use of these remedies, that she was urgent to have them repeated before the prescribed time.

On the 12th there was a continuance

of most of the bad symptoms. The night was passed in a restless manner. The abdominal muscles were very tense, evidently in a tetanic state; and a constant pain was felt in the lower part of the recti-abdominales and pyramidales muscles. The rigid state of these muscles, with the continued disposition to emprothotonos, and the indescribable feelings of distress in the *præcordia*, as if the heart itself was affected with tetanic spasm, afforded but small hopes of recovery; and we were not authorized in holding out any favourable prognosis to the desponding friends. I felt justified, however, in persevering with the remedies. The bowels had been copiously relieved, and some darkish *seybala* evacuated.

We found but little change on the following day, but still the turpentine, more particularly that given as an injection, afforded relief. The calomel was continued, but a draught, with *inf. senneæ* and *sulph. magnes.* was required in the afternoon.

On the 14th we could only say that things were not worse. The bowels were now freely acted upon by the calomel and injections, but the motions were changed from a dirty yellow and darkish appearance to that of a deep grass-green colour; and I here may say that this very green tinge continued until convalescence was fully established. I attributed it to the calomel.

15th.—The coldness about the *præcordia* was so distressing, that we administered small doses of brandy and ammonia, in camphor mixture, with evident relief. The other symptoms varied but little, with the exception of a much more copious flow of urine, and free discharge of the loose green motions after each injection.

16th.—There was a decided abatement of the spasms, and as our patient appeared to be much exhausted for want of rest, she took at night a full dose of the *liquor morpheï citratis* with *sp. ammon. aromat.* Alvine and urinal discharges the same.

17th.—Still further improvement; some refreshing sleep was obtained. The medicines were repeated; but from the irritating, or excoriating, effects of the turpentine upon the rectum and skin, we were obliged to lessen the use of it; still, however, it was not entirely given up.

18th.—A quiet night was passed; and

we now began to entertain very sanguine hopes of the recovery of our patient.

19th.—Still further improvement ; but the local effects of the turpentine were such as to compel us to omit the use of it. The calomel was only given twice in the day ; the night draught omitted, from its giving headache ; and emollient clysters, with light tonic medicines, prescribed. A very slight pytalism now came on ; but we could never detect any mercurial fetor in the breath.

20th.—A satisfactory state of recovery appears to be established ; but it was not for several days after this that the contracted muscles of the jaw, left arm, leg, and abdomen, assumed their natural state ; indeed, the full use of the jaw and arm is scarcely yet enjoyed.

I attribute much, as does Mr. Nicol, to the very free use of the turpentine in this case ; but others must determine whether or not our opinions are well-founded. I hope it may again have a fair trial ; and I should, if an opportunity offer, feel justified in trusting more to it alone than I did in this instance.

SUBSCRIPTION FOR THE FAMILY OF THE LATE DR. NUTTALL.

To the Editors of the Medical Gazette.
GENTLEMEN,

THE friends of the late Dr. Nuttall feel grateful to you for the notice you have taken of the cause in which they are interested.

I am happy to say that good has already resulted from your kindness, and have no doubt but the co-operation of all the Editors of Medical Journals will be the means of affording that assistance to the widow and children of the deceased, which the exertions and praiseworthy conduct of their lamented relative so justly entitle them to.

Some persons are disposed to think the family do not require the aid I have solicited—that relations can assist them. I must differ from those who have so said or thought, and assure them that, before I wrote on the subject, I made myself fully acquainted with inclinations and possibilities. Had I to write again, I could make the case even more striking.

When your readers are aware that the late Dr. Nuttall laboured for the Westminster Dispensary for fifteen years, and that he lost his life in the arduous discharge of his duties, they will be disposed, one and all, to allow that some recompense should be made to his unfortunate family. It has been stated, that medical men are not the only persons who should be called upon : so I think ; but I trust they will enable the friends of the deceased to go forth to the world with a brilliant display. The cause will thereby be strengthened ; and when the public beholds how well we have been supported, they will no doubt finish what the profession began.

For the satisfaction of those who feel interested for the family of the deceased, I beg to say that I will not cease to exert myself till the desired end be accomplished.

When it is considered the profession have had sufficient time to shew their respect to the memory of the late Dr. Nuttall, the case shall go forth to the world.

If you will allow your pages to convey to your readers the amount of subscriptions, I will shortly do myself the pleasure of sending you the list of subscribers, &c.

I am, Gentlemen,
Your obedient servant,
J. H. TUCKER.

16, Howland-Street, Fitzroy-Square,
December 22, 1830.

[Subscriptions are received by the various medical booksellers.]

MEDICAL EVIDENCE.

To the Editor of the London Medical Gazette.

SIR,

"Observer" deserves the thanks of every lover of medical science ; his suggestions are, in my humble opinion, worthy of the serious consideration of the medical world ; his valuable paper shows the dawn of brighter days. We have too long been slaves to authority. How many truths of high moment have been neglected, because they have not been sanctioned by great names ? or have not been introduced adorned with the meretricious blandishments of showy composition ? Much of our medical literature

requires revision; the flippancy and looseness of many statements are unworthy of the age. If all works were to be estimated by the number and importance of facts they contain, and by the philosophical accuracy of their conclusions, we should not be so misled by reviewers as we are. "Observer" has no cause to fear placing his name to such papers as he has produced. I hope he will openly avow himself; and I have no doubt that he will soon find himself surrounded by able coadjutors. He has my sincere thanks.

PHILO OBSERVER.

Maylebone, 20th Dec., 1830.

PARIS LETTER—MEDICAL NEWS.

To the Editor of the London Medical Gazette.

Paris, Dec. 20, 1830.

SIR,

I SHALL with great pleasure communicate the information you desire. The medical session is by no means at a stand, nor even interrupted. The political disturbances of the capital, so far from having a prejudicial effect upon the business of the schools, have rather made work for them—witness the interminable *leçons* at the Hotel Dieu and La Charité—which, by the way, with the exception of some valuable statistical details, the novelty of some of the wounds *par armes à feu*, and the advantages presented to "homekeeping youths," of seeing cases which, in civil practice, they could seldom if ever hope to witness, contained nothing in them to warrant their prolixity. Before I became an ear-witness of the clinical lectures of the French surgeons, I dared scarcely trust their printed reports. I used to suspect, either that those reports were perfectly emasculated by the shallowness of the reporters, or that the French were still behind us in the sound and clear principles of the medical art. The latter, I am now convinced, is the truth; and I cannot withhold the praise of correctness at least, from the reporters of the *leçons* of MM. Dupuytren and Roux.

It was not at all an improbable supposition of yours, that the political turmoil of the metropolis, and the susceptibility of the native students, should

have contributed materially to throw the schools into confusion; but the fact is, that the interference of the medical students in these party proceedings has been greatly exaggerated. The pupils of the École Polytechnique, and the law students, have been far more actively engaged—I mean since the "three days" in July; for in that great struggle for liberty, no class distinguished itself with more claims to courage and heroism than that of the medical students of Paris. They gallantly earned those rights which they have since procured from government; yet, as you observe, this ready demonstration of political feeling on the part of the students on all occasions, while it is quite characteristic of national habits, is one of the things most to be deprecated in the French system of education.

But without any further allusion to political changes and their circumstances, I shall confine myself strictly to medical matters. You have all heard, I suppose, of the appointment of a day (the first Monday in February) for the commencement of the *concours*, or rather of the three grand *concours*, which are to take place simultaneously. Three professorships in the Faculté are to be disposed of, namely, surgical pathology, physiology, and medical physics; and the tests of merit in the candidates are considered to be of a very trying description. I must confess, however, that much of the apparent difficulty vanishes upon a closer view. Perhaps among the hardest tasks assigned we are to reckon—the delivery of an hour's lecture on a given subject, after four and twenty hours' preparation; and again, an hour's lecture after three hours' study. As for the dissertation on the topics intended to be discussed in the course, and the written compositions on a subject drawn by lot—these, though the conditions prominently set forth in the *affiches* and public announcements, are no more than we every where find to be required of less distinguished candidates, at other less distinguished elections. The method of extemporaneous discussion is, it seems, not to be revived after all—much to the annoyance of the radical reformers of the faculty; but the Court of Examiners will be satisfactorily formed; it will be composed of twelve judges, and three assistants to act as substitutes in case of emergency. Of these judges eight,

and of the assistants two, are selected from the Faculté; the other four judges and remaining assistant are to be nominated by the Academy and strangers at the Ecole. It is expected to be altogether a grand display.

Visiting the Hotel Dieu lately, I was agreeably surprised to find M. Chomel there, in the amphitheatre, lecturing a large body of pupils. I had been aware of his removal from La Charité to this more extensive and desirable field for his labours—the *clinique medicale* of the largest hospital in Paris; but I was not entirely prepared for the circumstances which struck me upon this almost accidental visit. M. Chomel, formerly the successor of Laennec in the Charité, and now of Recamier in the Hotel Dieu, is unquestionably the ablest clinical teacher in France. Without possessing the genius of a Corvisart, or a Broussais, he is gifted with much sagacity, patient industry, and a mind richly stored with experience and powers of observation. I was rather surprised, as well as gratified, to find a man of his eminence in his profession pursuing the *English method* of clinical instruction. His plan is this, and it is the same, I understand, that he has practised since his first hospital appointment: after going round the wards, he assembles his pupils in the amphitheatre, and deliberately reviews the symptoms observed in each case; the diagnosis is then, and not till then, laid down. The questions put to the patient on the visit are simply such as may enable the Professor to make an exact note of the symptoms; the forming a diagnostic opinion being deferred until the reunion in the lecture-room. There is evidently a twofold advantage in this mode of proceeding: more certainty in the opinion pronounced on each case, it being deliberately formed; and secondly, it is a humane practice with regard to the poor patients, who are but too often driven to despair by listening to a final judgment pronounced upon them—a judgment which they may or may not understand, but upon which they naturally fix, in almost every instance, the worst construction.

M. Chomel is decidedly the most popular of teachers; and nothing so much contributes to make him so as the zeal which he displays in the performance of his duties. His pupils are delighted with his solid information, and the taste and discretion with which he delivers it, in

lectures remarkable for their perspicuity and simplicity of language. His patience at the bed-side is truly admirable: he explores with the utmost care, and in every possible way, the state of the different organs, calling the student's attention to every thing that appears to be interesting; and finally, in the presence of the assembled class in the amphitheatre, pronounces his diagnosis.

I cannot but feel anxious to pay a tribute to such a character as that of Chomel. I have seen no professor in the *salons* with whose manner I have been so much captivated. His personal appearance, too, is very gentlemanly and pleasing; nor should I take him to be above forty years of age. With regard to his medical doctrines, I may add that he seems to profess no exclusive or particular system: he has no favourite theory to support; and facts alone, with their rigorous consequences, constitute whatever general principles can be imputed to him. He entertains the highest respect indeed for the principles of Corvisart and Laennec; but above all, he values his own experience. By this alone does he profess to advance the study of pathology, and of medical science.

The learned societies of Paris hold their stated meetings with great regularity, and are numerously attended at this season. I am very fond of an occasional visit to the Institute. In the Academy of Sciences some of the most eminent persons of the age are to be seen, and some of the most interesting discussions to be heard. It is well known that there is nothing very dignified or impressive in the usual aspect of those meetings; but our mental associations contribute to render the business with which they are occupied intensely interesting. Nor are the proceedings always of that grave and sober cast which I had expected before I knew them better. I was a good deal amused lately by the reading of a memoir on the history of cholera morbus, by M. Moreau de Jonnés. The author proceeded to describe, with great precision, the marches and counter-marches of this formidable disease, and to relate the details of its three several irruptions into Europe; how, setting out originally from Bengal, it pursued the famous track of Vasco de Gama, threatening to double the Cape, and actually proceeding so far as to reach the Isle of France, its further progress being cut off by the

precautionary measures which were adopted at the Cape of Good Hope. On the second occasion this doughty traveller set out once more from India, traversed Mesopotamia, pushed into Syria, and stopped short in front of Greece. The third, and last time, it sprung out of Bombay, invaded Persia, pursued the caravans of Samarcand, reached Astracan, and the government of Oremburg. (Here M. Moreau appealed to the testimony of M. Humboldt, who was present at the meeting). The cold, he continued, had in every instance checked the progress of the disease. In 1829 the Persian government took no precautionary measures, and accordingly the cholera spread right and left; it went to Tauris, passed the Araxes, and penetrated the Russian provinces of the Caucasus. It then coasted along the sea by Derbend, traversed Kaubau, passed along the banks of the Don, and in another direction pursuing the Volga, it at length invaded all the governments of great Russia. It was at Moscow by the 28th of September last; but the emperor commanded that the steps usually taken in plague should now be adopted; the city was divided into forty-seven quarters, barriers were erected, &c. &c.; and by the latest intelligence we learn that the cholera has visited the peaceful Tartars, and is at this moment in Sevastopol. M. Moreau concluded his account of the travels of cholera by alluding to what he called the *deplorable fatuity* of Russia, in sending at this time large bodies of troops into Podolia; for the disease will thus, he said, be alarmingly extended, and may at last be introduced into Germany.

Unluckily M. Humboldt, who was so confidently appealed to, did not confirm the preceding statements. He denied even the probability of cholera being imported into Oremburg by caravans; for the latter had reached that place full four months before the disease was heard of. The same sort of conjecturing, added the learned traveller, has been applied to the history of yellow fever; it has been attributed to such and such circumstances, when presently it turns out that those circumstances never have had any existence. "For my own part," said M. Humboldt, "I should be inclined to say that the cholera morbus has sprung into being in the Russian empire all of a sudden, simply

in consequence of some peculiar modification of the atmosphere."

Several offers have been made by French physicians to go out to Russia to investigate and to report on the subject of cholera; their expenses to be paid by the Academy. The Academy demurs to this.

The students have lately held several meetings in the large amphitheatre of the *École de Médecine*. Their object is to push still further their demands on the Minister of Instruction: having gained their point on the great question of the reorganization of the faculty, they feel their own strength too sensibly to leave any supposed grievance unredressed. They have got up a petition to M. Merilhon, which, among other requests, contains the following: that *all* the hospitals be thrown open to the pupils of the School upon the simple presentation of their matriculation tickets; that the *Maternité* and the *Veneriens* be also thrown open, but with certain equitable restrictions; that the examination for the bachelorship in arts be suppressed in the case of undergraduates in medicine, inasmuch as the same business is required in the first examination of the *Faculté*. There are other points relating to the throwing open of the Library and the Museum, &c. but I shall not enter further into detail at present. I must close my letter, moreover, as I fear I have trespassed rather unreasonably on your time and space: and to tell the truth, I do not feel quite at ease writing on matters of purely professional import, when all the world around me is up in a state of excitement, caused by the progress of the trials in the Chamber of Peers. There is no knowing but that things may be all turned topsy turvy once more, in the event of an unpalatable sentence on the prisoners.

Yours faithfully,
ANGLAIS.

SIR CHARLES SCUDAMORE.

To the Editor of the London Medical Gazette.

SIR,

In an article contained in your No. for Dec. 4th, and which was put into my

hands by a friend only a few days ago, I find that I am accused of a fraudulent usurpation of an honour connected with Trinity College, Dublin. I feel it, therefore, incumbent on myself to request that you will have the candour to insert a verbatim copy of the diploma transmitted to me by the Provost of Trinity College, and which I now place in your hands. From this it would appear that I should more correctly have styled myself by the higher title of Honorary Doctor of Medicine of the University of Dublin.

The remaining observations in this offensive article, I must consider so coarse and illiberal as to be deserving only of my silent contempt.

Most persons know that the glass vessels used for the purpose of inhalation are to be procured from various respectable chemists; and I trust that few can require to be informed that they are not, as is stated in your Gazette, "to be had or used at No. 6, Wimpole-Street."

I am, Sir,

Your obedient servant,

CHARLES SCUDAMORE.

Wimpole-Street, Dec. 23, 1830.

Diploma.

"Omnibus ad quos presentes Literæ pervenerint Salutem. Nos Præpositus et Socii Seniores Collegii Sacrosanctæ et individuae Trinitatis, juxta Dublin, testamur CAROLO SCUDAMORE, gratiam pro gradu Doctoratus in Medicinâ, honoris causâ concessam fuisse die Octobris duodecimo, Anno Domini millesimo octingentesimo vicesimo secundo. In cujus rei testimonium singulorum manus et sigillum publicum Collegii apposuimus, die Novembris nono, A. D. millesimo octingentesimo vicesimo secundo."

[That Sir Charles Scudamore should not have been pleased with the notice taken in this journal of his last pamphlet, we can readily understand, but that he should indite an answer to it, containing the most direct proof of his being in error on the only point he thinks it necessary to defend, does appear not a little extraordinary: such, nevertheless, is the case. Our reviewer, whom we know to be perfectly well acquainted with the regulations of the medical institutions in Ireland, expressed his be-

lief that there was no such designation conferred on any person as "Honorary Member of Trinity College, Dublin;" and, consequently, his doubt whether Sir Charles was warranted in appending it to his name. In order to prove that our reviewer was wrong, and that he himself was right, the worthy Knight has transmitted to us his diploma, by which it appears that he is an *Honorary M.D. of the University of Dublin*—a designation which he acknowledges (see his letter) he "should more correctly" have adopted. Now in what manner Sir Charles supposes, that proving his right to a designation which he did not use demonstrates his title to one totally different which he did use, we have not been able to discern. To us it appears perfectly clear that Sir Charles has a right to the designation conferred upon him in the diploma, and to no other; that, by his own shewing, the one he adopted was an unwarrantable assumption, and justified the remarks made by our reviewer.

Sir Charles may say that his pamphlet was treated somewhat contemptuously: granted: but he will do well to remember that when a man follows close in the wake of a notorious quack, he runs the risk of coming in for some portion of the obloquy attached to such persons. It was an unlucky time for any one to write on the cure of consumption by inhaling and embrocations.]

ANALYSES & NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abrégér."—D'ALEMBERT.

The Nervous System of the Human Body: embracing the Papers delivered to the Royal Society on the subject of the Nerves. By CHARLES BELL, F.R.S.

WE have looked attentively into this volume, with the better part of the details of which the medical world has been long since acquainted, and we have derived new and increased pleasure from our examination. We look upon it as a great national work, of the general merits of which the public should not be ignorant; nor should we set much value upon the attainments of

him of our profession who may not be minutely conversant with its particular excellence. The complaint which prevailed up to a comparatively recent period, that the nervous system was a mass of complexity, can no longer be entertained: the fancies of the ancients on the subject have been exposed and confuted; the erroneous hypotheses and conjectures of many eminent moderns, who even based their opinion upon correct anatomical facts, have been overthrown and exploded; and order and simplicity of arrangement have been at length successfully established.

It is not our intention, nor indeed is it necessary, to enter into an explanation of Mr. Bell's views of the nervous system; our pages have been already amply enriched with his own reported sentiments on the subject; and we refer more particularly to our first and fifth volumes for the substance of the better part of the work before us. But we may be permitted to notice, with some little detail, a few of the circumstances which preceded and attended our author's discovery: it will thus be seen what perplexities and difficulties he had to contend with, and what obstacles he has been enabled to overcome.

Mr. Bell never fails, when opportunity offers, to descant largely in favour of anatomy, as better adapted for discovery than experiment. Yet it would seem that anatomy had done almost every thing that it could do towards conducting some of the ablest inquirers to his own conclusions. The comprehensive mind was still wanting, that by inductive reasoning should attain the desired end. Monro, for example, had discovered that the ganglions of the spinal nerves were formed on the posterior roots, and that the anterior roots passed the ganglions. Santorini and Wrisberg observed the two roots of the fifth pair of nerves. Prochaska and Soemmering noticed the resemblance between the spinal nerves and the fifth pair, and they acutely inquired—why should the fifth nerve of the brain, after the manner of the nerves of the spine, have an anterior root passing by the ganglion and entering the third division of the nerve? A guiding principle was what those profound anatomists wanted; and without it, it appears that the multiplicity of anatomical facts which were day after day discovered, only added to

the intricacy of the subject. Paletta discovered the anterior root of the fifth nerve ramifying to the muscles of the jaw, and concluded it justly to be a muscular nerve; but here he suddenly stopped short, and declared that for the other branches of the fifth he did not know what to make of them. And what blundering was there not among the most clever of the British anatomists? It had been asserted by Johnstone that ganglions were for the purpose of cutting off sensation. Monro, on the contrary, conceived that they did not cut off sensation, for they were attached to nerves which he knew to be muscular nerves! "That ganglia," he says, "do not serve to render motions independent of our will, as an ingenious author (Johnstone) has supposed, is evident, without observing more than that all the branches of the fifth pair, and the posterior half of all the spinal nerves of the voluntary muscles, pass through ganglia." How remote from the truth the whole of this assertion is, it were perhaps impertinent now to point out; we only remark, *en passant*, that not a single motor nerve, from the head to the heel, passes through a ganglion.

So early as 1811, Mr. Bell published his "Idea of a new Anatomy of the Brain:" a little work intended only for the observation and perusal of the author's friends; it contained the germ, the guiding principles, and much of the substance of his subsequent researches. By this little production, from which a copious extract is given in the Preface of the present volume, the perfect originality of the author's discoveries is defended against the unworthy attempts of Magendie to deprive him of the high merit that belongs to them. We cannot think with common patience of the effrontery of the man who would lay claim to discoveries which were secured, not only by the publication just mentioned, but by their insertion in the Philosophical Transactions, nearly a twelvemonth before that claim was set up. In July 1821, Mr. Bell's first paper on the arrangement of the nerves was read to the Royal Society; and in December of the same year, it appears that Mr. Shaw wrote a paper on the facial nerves, in Brande's Journal of Science. In this the writer stated, that, at the request of M. Magendie, he had repeated Mr. Bell's experiments on the face of a

horse at Charenton, near Paris, and had at the same time presented a copy of his "Manual," which contained an ample account of Mr. Bell's system, to M. Magendie. Other papers were written by Mr. Shaw, on the same subject, for the *Quarterly Journal* and the *Medico-Chirurgical Transactions*. Yet, in July 1822, forth comes the famous paper of M. Magendie on the Nerves of the Spine. These few plain facts require no comment.

We do not wonder, when we consider some of these circumstances, at the extreme nationality of Mr. Bell; but we are anxious to give him credit for that excellent feeling, upon better and more disinterested grounds. In the second part of his paper "on the Nerves of the Orbit," he comments, we think, very fairly and impartially upon the merits of some of the continental theorists: to Bichat, whom he has in another part of the volume strongly censured for more than one error in his doctrines relating to the nervous system, he here attributes "honour due" for his having ascertained that the ganglions and branches of the sympathetic nerves are positively insensible and incapable of bestowing motion; to Le Gallois, also, he is sufficiently complimentary for his experiments in regard to the source of the respiratory movements: but in alluding to certain other physiological theories of the continental professors, we are not displeased to find him speaking in the following strain of disapprobation, while we heartily concur with him in the national spirit that breathes in the second passage:—

"The most extravagant departure from all the legitimate modes of reasoning, although still under the colour of anatomical investigation, is the system of Dr. Gall. It is sufficient to say, that without comprehending the grand divisions of the nervous system—without a notion of the distinct properties of the individual nerves, or having made any distinction of the columns of the spinal marrow—without even having ascertained the difference of cerebrum and cerebellum, Gall proceeded to describe the brain as composed of many particular and independent organs, and to assign to each the residence of some special faculty.

"When the popularity of these doctrines is considered, it may easily be conceived how difficult it has been, dur-

ing their successive importations, to keep my pupils to the examples of our own great countryman. Surely it is time that the schools of this kingdom should be distinguished from those of other countries. Let us continue to build that structure which has been commenced in the labours of the Monros and Hunters, and which the undeserved popularity of the continental system has interrupted."

The nationality which displays itself in this just appeal, cannot, we repeat, be too much admired and encouraged. It is, in truth, full time for all rational thinkers to be heartily tired of that rage which is so prevalent in favour of foreign opinions; and to hold up to well-merited obloquy that lamentable lack of mental energy which languidly depends upon the importation of novelties, and estimates the value of newly-broached doctrines by the extent of space over which they have travelled, and the uncountness of the names of their authors.

Mr. Bell speaks with great modesty throughout the volume of the practical benefit which is likely to be derived from his investigations: "not only shall the physician discover distinct systems of nerves to be the seat of disease, but he shall acquire new powers of discriminating symptoms." On the importance of pursuing our researches into the nervous system, and of illustrating its apparent complexity, there cannot now be a second opinion; but we are delighted to be able to record the sentiments of John Hunter on that subject—not only because every sentiment of such a man is deserving of our most profound attention, but because we fancy the passage which we extract is not familiar to most readers; even Mr. Bell confesses it had escaped him until very recently: it is to be found in Mr. Hunter's work on the *Animal Economy*.

"The nerves being in themselves, perhaps, the most difficult parts of an animal body to dissect, becomes a reason why we are still unacquainted with many of their minuter ramifications; yet, if a knowledge of these, together with that of their origin, union, and reunion, is at all connected with their physiology, the more accurately they are investigated the more perfectly will the functions of the nerves be understood. I have no doubt, if their physiology was sufficiently known, but

we should find the distribution and complication of nerves so immediately connected with their particular uses, as readily to explain many of those peculiarities for which it is now so difficult to account. What naturally leads to this opinion is, the origins and number of nerves being constantly the same; and particular nerves being invariably destined for particular parts. The fourth and sixth pair of nerves are remarkable instances of this; and we may reasonably conclude, that every part has its particular branch allotted to it; and that however complicated the distribution may be, the complication is always regular. There are some nerves which have a peculiarity in their course, as the recurrent and chorda tympani; and others which are appropriated to particular sensations, as those which go to four of the organs of sense—seeing, hearing, smelling, and tasting; and some parts of the body having peculiar sensations, as the stomach and penis, we may, without impropriety, include the fifth, or sense of feeling. This general uniformity, in course, connexion, and distribution, will lead us to suppose that there may be some other purpose to be answered more than mere mechanical convenience; for many variations have been described in the dissections of nerves, which I believe to have arisen from the blunders of the anatomist, rather than from any irregularity in their number, mode of ramifying, course, distribution, or connexion with each other. We observe no such uniformity in vessels carrying fluids; but find particular purposes answered by varying their origin and distribution: the pulmonary artery answers a very different purpose, in the circulation of the blood, from that of the aorta; yet both arise from the same source, the heart. The course of the arteries is such as will convey the blood most conveniently, and, therefore, not so necessary it should be uniform; it not being very material to a part by what channel the blood is conveyed; though, in particular instances, certain purposes may be answered by a peculiarity in origin and distribution, as happens in the testicle of quadrupeds. This observation respecting arteries is likewise applicable to veins, and still more to the absorbent vessels, in which last, regularity is even less essential than in the veins. Whoever, therefore, discovers a new artery,

vein, or lymphatic, adds little to the stock of physiological knowledge; but he who discovers a new nerve, or furnishes a more accurate description of the distribution of those already known, affords us information in those points which are most likely to lead to an accurate knowledge of the nervous system: for if we consider how various are the origins of the nerves, although all arising from the brain, and how different the circumstances attending them, we must suppose a variety of uses to arise out of this peculiar structure. Indeed, if we reflect on the actions arising immediately from the will and affections of the mind, we must see that the origin, connexion, and distribution of the nerves, must be exact, as there are parts whose actions immediately depend upon such circumstances."

Before we conclude our notice of this valuable volume—we have already called it, advisedly, a national work—we should mention that it contains, in addition to the six papers presented to the Royal Society at various dates, between 1821 and 1829, an historical preface, an introduction, and an appendix—the latter full of miscellaneous illustrative matter, cases chiefly, and letters of consultation. It forms, on the whole, a complete treatise on the nervous system, so well arranged, and so well furnished with collateral illustration, that it may be studied even by unprofessional readers with interest and advantage. It is beautifully executed in point of typography, and has nine admirable plates appended to it, engraved by Finden and Basire, from the drawings of Mr. Bell. We need scarcely add that we would recommend the volume to the repeated perusal, and of course to the possession of every professional reader; while its general nature and object being such as we have described them, claim for it the privilege of being deposited in every respectable library in the kingdom.

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Article on Surgery, written for Brewster's Encyclopædia. BY JOHN LIZARS.

THE "Article" which forms the subject of the present notice, has been sent to us bound up separately from the rest of the *Encyclopædia*. It constitutes a little system of surgery, containing a great

mass of information in a very small compass, and is really an excellent condensation of all the most important subjects within the range of surgery. It is accompanied by an index, which enables the reader to refer to any disease without difficulty, and there are three large plates, in which an extraordinary multiplicity of figures are introduced without creating the least confusion. The essay is highly creditable to the author and to the work of which it forms a constituent part.

Anatomical Demonstrations, or Colossal Illustrations of Human Anatomy.
By Professor SEERIG. Translated from the German. Part I.

The first No. of this work, which has just appeared, contains four plates, giving magnified views of the side of the head, depicted so as to shew, 1st, the nerves and bloodvessels, and 2d, the internal cavities of the mouth, nose, eye, &c. The third and fourth plates represent the eye and ear on the same large scale. The engravings are on stone, but coarsely done. They are, however, very cheap, and will be of use to anatomical teachers, as the parts are of a size which renders them easily seen at a distance.

MEDICAL GAZETTE.

Saturday, January 1, 1831.

“*Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso.*”—CICERO.

RETROSPECT OF THE PAST YEAR.

THOUGH neither commencing a new medical session, nor a new volume, the date of our present paper may justify us in making a short pause—if not to “welcome the coming,” at least to “speed the parting guest.” The departed year has been one of no ordinary character; it has been marked by the occurrence of important events in the

medical, as well as in the political world; it has been big with the fate of notorious personages of various descriptions; and we trust, that the interest we evinced in each event as it passed in order before us, will form our best apology for reverting to a few of the most prominent circumstances of the period. Nor let it be deemed presumptuous in us if we contemplate our labours with some degree of complacency. To others we leave the task of portraying an alluring prospect, in order to raise expectations, by promises of what they intend to do; ours be it, to give hope of us by pointing to what we *have* done, and to raise no expectations but what naturally arise from a review of our services in the cause of learning and honesty, pitted against ignorance and fraud.

To enumerate, with even the shortest comment upon each, the various topics which have engaged our attention week after week during the past year, would fill a space much larger than we could possibly devote to so miscellaneous a subject; suffice it to direct the reader's attention for a few moments to a very limited number of the events which drew forth our best exertions. We shall touch upon them in chronological order, and thus, perhaps, make up an agreeable “picture in little” of the medico-political features of the year gone by.

It was our lot to begin the year with rather an ample discussion of the medical and legal tests of insanity—a subject which, at intervals, subsequently occupied our attention, in consequence of repeated moot cases brought before the public; but our first notices were suggested by the Commission of Lunacy, which had just then terminated its labours in Mr. Davies's case. Without entering upon the details of that Commission, rendered memorable by the direct collision of some of the ablest

members of the professions of law and physic, we may just advert to the issue of the business. That issue, we take it, was but a monstrous error, attended with the most extravagant expense, and conferring no practical or moral benefit whatever upon the community. The decision in Davies's case only added another to the many proofs already existing, of the uncertainty that attends all inquiries regarding insanity dependent on medical evidence. Medical men, we have always thought, are too easily satisfied that an individual is insane; while others, on the contrary, are often led to regard as of sound mind persons labouring under the most decided and confirmed lunacy; and so it must continually be, until some standard be fixed. Nor shall the blame of the deficiency be attached to the medical profession alone—the law cannot “measure the sizes of men's capacities,” though it undertakes to influence the decision in the last resort; and the question may still be asked of both professions—what is that state of mind which constitutes *non compos mentis*? To this no man can answer. So undefined seem the requisites of this condition, that no two authorities take identically the same view of them; and, in truth, Polonius's definition may still be as good as any:—

“To define true madness, what is it but to be truly mad?”

It has been proved, however, beyond a doubt, that the legal cannot, with any reason, taunt the medical profession with contrariety of opinion on this the most doubtful of all questions connected with medicine. We need not go far ere we find another profession yet more uncertain, though avowedly resting upon precedent and authority; and not like ours, totally dependent on reasoning applied to data, which but too often are unavoidably imperfect.

In Mr. Davies's case, the question of sound or unsound mind admitted of

little variety of opinion. The difficulty lay, as it generally does in these inquiries, in ascertaining the necessity for personal restraint; and the great error was distinctly traceable to that source so ably detected by a late eminent writer. “We think,” says he, “that we have discovered the secret sophism by which our inquirers are misguided. The legal instrument on the authority of which a lunatic is seized and confined, is a certificate signed by a medical man, and containing two propositions:—first, that he is of unsound mind; and secondly, that he is unfit to be entrusted with his liberty. Now where is there any thing in this world clearer than this—that of these two propositions, the second is the only one of the smallest practical importance; the only one with which society, and the laws, and the friends (when they are what they ought to be), have any thing to do? Our doctors of the mind proceed in this way; they pronounce the patient to be of unsound mind, and then *infer*, as a necessary consequence, that he ought to be confined. The sophism evidently consists in making that a matter of inference which ought to be a matter of direct inquiry.”

But the insanity question is one of a bewildering nature: even now we have suffered ourselves to be carried away farther by it than we had intended; we must return to our notes of the year.

The order of notice which we have adopted brings us next to mention the proceedings of, and relating to St. John Long—decidedly the most prominent character who figured before the eye of the public during the period of which we treat. What we have done towards the exposure of the quackery of Harley Street, it becomes not us to allude to more particularly than just to say, that our exertions have been more than compensated by the strong expressions of approbation with which they have been

greeted from all quarters. The book, we may add, which the presumptuous, but misguiding man, had the weakness to publish, fell into our hands so early as February. To that publication may the author ascribe much of his subsequent notoriety. His fall can only be attributed to his ignorance and cruelty, directed to their appropriate destination by the providential arrangement of human affairs. Exposure, however, not punishment (properly so called, and so properly called for) has been allotted to him: and in vindicating the cause of offended justice, public opinion, so far as it could extend, has done every thing—the laws, nothing.

The last illness and death of his late Majesty formed another prominent and interesting topic in our pages. We do not refer to our reports of the circumstances as to matters of any peculiar value, worthy of being treasured up for their historical importance: they are, perhaps, however intensely interesting at the time, now mere matter of curiosity. But we take credit to ourselves, and credit we have been given, for the correctness, fulness, and fidelity of those reports. The future annalist may refer to them with confidence.

In turning over our last year's pages, we miss one subject which used to be of perpetual standing importance—we mean the long promised Anatomy Bill. No stir whatever has been made about it during that part of the Parliamentary session which has just closed; and it is quite uncertain what is to be expected in the next. We were told some six months ago that a Bill was to be introduced early this session, and that every thing looked favourable for its success. But nothing has been done; the subject seems to have been altogether laid on the shelf, and this at a period when any thing but unfavourable sentiments are entertained by the influential classes of the commu-

nity on the substance of such a measure. Neither was it brought forward in the session of 1828-9. It is to be feared that there is much apathy on the part of certain members of parliament, from whom much was expected in this business—some say it is timidity; for it has even been reported that the *friends* of the measure were deterred from bringing it forwards ere now by the apprehension that their constituents entertained very violent prejudices against any indulgence being shown to anatomical teachers; but the fact is otherwise, and it looks like a mere evasion or excuse for indolence. We know that Mr. Warburton, the manager of the former unsuccessful bill, met his constituents at Bridport, and frankly conversed with them on the *anful* subject. So far, however, from any dissatisfaction being expressed on the occasion, unequivocal marks of approbation were displayed by those present, and the honourable gentleman was justly regarded as having exerted himself in removing one of the greatest scandals of British legislation—compelling men to break the law in order to become legally qualified to practise their profession; and to violate the strongest feelings of our nature, in order to secure the dearest interests of humanity.

In lieu of this important measure—the neglect of which, by those entrusted with its management, we so deeply deplore—we had the pleasure of introducing to our readers' notice several occasional subjects, of a novel and interesting nature—many of them for the first time discussed in any journal; we merely notice at present our articles on the establishment of a national cemetery, with an estimate of the respective merits of certain proposed plans—the propriety of having representatives in Parliament of the medical profession—the dissensions and the pretensions of the London University—tracts on quacks

and quackery, with discussions on the state of the laws relating thereto—the French arrangements relating to the concours—the propriety of medical coronerships, &c. &c. With these few and brief remarks we close our reminiscences of the past, and enter cheerfully upon the duties of the present year.

DISINFECTING QUALITY OF THE CHLORURETS.

Report presented to the Council of Health in Paris, on the removal of the dead bodies that had been deposited in the vaults of St. Eustache after "the three days." By M. LABARRAQUE.

WISHING to ascertain how much danger, if any, attended the exhumations which had been effected in various parts of the city, the Council deputed several of its members to make the necessary inquiries, and the result was, that it appeared that those bodies which had been buried at the Innocents, at the Jardin de l'Infant, and in the vaults of certain churches, might be suffered to remain as they were, without detriment to the salubrity of the neighbourhood, as they were covered with several feet of earth. Not so at the church of St. Eustache, where this precaution had been neglected, and where 43 bodies now lay.

M. Labarraque was chosen to draw up the report, in conjunction with M. Parton; for to them had been entrusted the business of the removal, which indeed was performed by them with all due speed and regard to economy.

"A horrible smell filled the church, and a neighbouring house, into which it penetrated through a vent-hole in a chimney funnel. Measures had been proposed to remedy this accident, but by some mismanagement in the proprietor of the house, the thing was made worse than it was before. It was intended by the Committee of the Council to establish, by means of a tube connected with the stack of chimneys, a rapid current of air, which would have most materially facilitated the removal of the corpses; but this failing, recourse

was had to the expedient of opening two entrances, by which to descend into the vaults. But what with the anticipated difficulty of procuring an effective body of workmen, and the other necessities for the accomplishment of the design, besides the apprehension of not being able to finish it in a single night, so as to leave the church at liberty for the celebration of service on the great festival, it was determined to postpone the operation until the 16th of August, at ten at night; and till then nothing more was to be done, except the neutralising of the putrid odour which was diffusing itself in the church through the floor of one of the chapels: here some chloruret was deposited, and with complete success.

"When the appointed evening came, about half past eight, we placed, on either side of each intended opening, a trough of the capacity of about 150 litres, and a similar one at the great door of the church. Into one of the largest troughs, we threw six kilogrammes of chloruret of lime, and upon it poured as much water as the vessel would contain. After suffering it to stand for half an hour, we decanted the liquor into the second large trough. More water was then poured upon the residue of the chloruret until it was exhausted, and finally a farther quantity of six kilogrammes more, with additional water, was poured in, until all the troughs were filled with the chloruretted fluid. Meantime, all the doors and windows of the church being thrown wide open, the operatives fell to work in effecting the new entrances into the vaults, and the moment the matlock penetrated the cavity, a copious affusion of the chloruret was made, and with such effect that the workmen did not perceive the least disagreeable odour. The size of the openings when finished was about six feet by two, and through them a plentiful shower of fluid was discharged into the vaults. By this time, M. Parton had arrived with suitable vehicles, two casks for containing chloruret, and twenty stout labourers, sewer-cleaners by trade. The work was now vigorously begun. Three men, one of them from the morgue, and all accustomed to the kind of work they were going to do, equipped themselves with a protecting cover (*en bridge*), and went down into the vaults with lighted lamps in

their hands. Two buckets of chloruret had been previously let down, and the men scattered the disinfecting liquor copiously over the walls and floor of the vault. The *bridage* interfered materially with the progress of their operations, and MM. Parent du Chatelat and M. Labarraque descended as well for the purpose of viewing the bodies and the state of the place, as to ascertain whether the workmen could safely strip off their outer covering, and pursue their labours divested of that cause of embarrassment.

"The vaults of St. Eustache are of great extent; they are in the form of a cross, the longer limb of which measures upwards of 20 metres by 7, and the roof is 5 metres high. The transverse part of the cross is much more narrow, the height of the roof, however, is the same. In one of these parts lay 12 bodies, most of them of large size. Just beneath one of the openings was a heap of earth reaching nearly to the roof, and which obliged whoever went down to creep on all fours: it happened, too, that under a portion of this heap, three more bodies were placed, that gave great trouble in their removal. The remainder of the corpses were ranged side by side through the vaults, simply covered with a slight stratum of powdered lime, which retarded their disorganization a little. A bed of lime thickly spread over the floor must necessarily have absorbed the carbonic acid, whence the reporter concludes that carbonic acid, at least in this instance, has not been the cause of the rapid disinfection of the air of the vaults, and that an exact theory of the phenomenon still remains to be discovered.

"A number of thick, compact, and spongy pieces of linen cloth were prepared; they measured each of them two metres every way; they were steeped in the trough of chloruretted liquid, and after being slightly wrung out, were conveyed down into the vault. There the workmen used them one by one; each piece of cloth was laid alongside a corpse, and then the latter was drawn over upon it by means of a drag. Once on the cloth, the body by rolling was easily wrapt up in it. The envelope was then tied at head and foot with packthread, besides with a stout cord which went round the body in three places; after which four of the men took it up and laid it beside the opening, where it was besprinkled

with the fluid; and then five more men conveyed it to the carriage. On its passage to, and deposition in the vehicle, it was again bedewed with chloruret. During the whole of these operations the labourers, who relieved one another alternately, took care from time to time to bathe their hands in the disinfecting fluid, and to make such repeated sprinklings about the opening of the vault, that the atmosphere in that quarter was fully charged with the chloruretted vapours. The removal of the 43 bodies was begun about a quarter past ten, and brought to a conclusion, without any accident, at half-past one; and should have been finished sooner, but for the difficulty of getting at the three last corpses. About half the fluid was still remaining, and was poured out on the floor of the vaults, in order to remove the troughs the more readily.

"But the deputies of the Council of Health did not deem their task yet completed; one of them proceeded to the cemetery Montmartre, along with M. Parton and all the labourers who were employed in the work we have just detailed. The bodies were conveyed in seven carriages; an eighth carried the utensils, and was followed by two hogsheads of the fluid, and a cart full of quick lime. The procession set out at two in the morning, and was conducted with all that respectful attention which is so sacred to the mourning soul.

"A common grave, of eleven metres in length by about four and a half in breadth, and two in depth, had been laid out for them by order of the prefect of the Seine. In this the corpses were deposited, after having been once more well sprinkled with chloruretted liquor, which we prepared on the spot by the admixture of a pound of chloruret to six buckets of water. The men who laid the bodies in the grave were provided with this liquor, and those who were occupied in unloading the carriages also made much use of it. In fine, the *victims*, after having been decently settled, were covered with quicklime and then with earth."

We have allowed the reporter freely to relate all his interesting details; they may be useful in any case of similar occurrence. The disinfection was rapid and complete, and the removal unattended with danger. Surely if any doubts have been hitherto entertained of the efficacy of the chlorurets, these

facts were enough to remove them. The zeal displayed by the inventor of this invaluable remedy in putting it to the test in every circumstance, is beyond all praise. M. Labarraque shrinks from no effort—no sacrifice.—*Lancette Française*.

LINNEAN SOCIETY.

M. Don lately read a paper at the Linnean Society on the plants from which Ammoniacum and Galbanum are obtained. The former, he says, is a native of the north of Persia, and that the proper name is *Armeniacum*. He regards the plant as one of a new genus, which he calls "Donema," and the medical species he proposes to denominate "*D. ammoniacum*." The plant which yields Galbanum he also looks upon as new, and suggests that it be called "*Galbanum officinale*." The Bubon galbanum, hitherto regarded as the source of the drug, he says is totally different.

THE MEDICAL PROFESSION.

A CORRESPONDENT has furnished us with a list of surgeons, apothecaries, druggists, and quacks, practising within the township of Stockport, with full particulars of their servitude and passing one or both colleges. Propriety denies the publication of it in the way it is made out, but as an analysis can do no harm to the parties, we shall give it in that shape, viz. :—surgeon and apothecary, *eight*; surgeon only, *two*; apothecary only, *four*; of those who passed neither, but commenced before the act of 1815, having served five years' apprenticeship, *nine*; commenced since the act, but have served a regular apprenticeship only, *three*; druggists, *seven*; druggists, who have not served five years, *two*; served no apprenticeship as druggists, *two*; quacks without education, except such as is befitting the trade they were brought up to, *six*; amongst them is a groom, a cow-man, a hand-loom weaver, a steam-loom weaver, and a strolling player.—*Stockport Advertiser*.

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

EDINBURGH INFIRMARY.

Case of Purpura—Employment of Bleeding—Fatal Result.

DAVID CROSS, æt. 25, servant, admitted Dec. 2. The surface of the whole body, except the face, is covered with dark-coloured petechiæ of various size, from that of a sixpence to that of a pea or less; in many of these the cuticle is elevated, and the vesicles contain blood; interstitial skin of natural appearance. The eyes are suffused with ecchymosis under the conjunctiva; the pupils are contracted, but sensible to the stimulus of light, which is not disagreeable; no headache, vertigo, or tinnitus aurium; mental faculties unimpaired; the tongue is thickly coated with white fur, and on the edges there are some petechiæ; complains much of sore throat and thirst; there is cough, with thin mucous expectoration, coloured with blood; respiration is hurried, and much oppressed; no pain of chest; right side of thorax posteriorly sounds duller on percussion than the left, and in that situation, as well as in the anterior upper third of chest, the *râle sonore* is heard, with occasionally the *râle muqueux*, which, lower down, is sometimes mixed with the *râle suscepi-tant*; decubitus on either side indifferent; manners hurried, with much restlessness. There does not appear to be disease of any of the abdominal viscera, nor has there been hæmorrhage from any of the external outlets, except in a slight degree from the nose. Pulse 152, ill defined, labouring. Does not complain much of debility. Bowels open by medicine. States that on the evening of the 27th, after exposure to cold, was seized with rigors, which continued through Sunday and Monday: on the latter day, his breathing being much oppressed, he was bled, and took some aperient medicine. On Tuesday the petechiæ appeared. Previous to this attack he enjoyed excellent health, except that, six weeks previously, he had a catarrh, for which he was bled, and perfectly recovered in a fortnight. Asserts that his habits generally are not intemperate, but has lately been occasionally intoxicated.

Fiat V.S. Postea sumat haust. ex Liq. Opii Sedativ. gtt. xxv. Ether Sulph. ʒj.

3d.—Was bled to 18 oz.; evacuation borne well, but towards the end the pulse became weaker; was up at stool, and his situation did not appear materially altered until 10 o'clock, when he died, within three hours after admission. Blood has not coagulated, but the colouring particles have subsided; serum abundant.

Section.—Appearance of skin scarcely at all changed since death; effusion of blood on

dividing the integuments confined to the skin; blood every where fluid; lower lobes of both lungs loaded with blood, but no extravasation, nor effusion of serum; much frothy mucus in the smaller bronchi, the lining membrane of which was red. There were petechiæ under the serous covering of the liver; substance of this organ healthy, without sanguineous extravasation. Intestines externally dark coloured; numerous petechiæ under mucous membrane of the stomach, the colon, and rectum; not in any other part of the intestinal canal. Heart and spleen healthy; faint petechiæ seen on the kidneys after serous envelop was removed; structure healthy; calices of the right kidney of a dark venous colour, but no extravasation into the cavities; calices of left kidney of natural appearance. Some blood in the right ureter, and fluid in the bladder tinged red. Surface of the brain quite healthy, as also its internal structure.

NORTHAMPTON HOSPITAL.

Case of Aneurism of the Aorta—Bursting into the Pericardium.

[Communicated by Mr. J. W. West.]

JOHN WATERS, aged 50, of a robust form of body, formerly a sailor, but of late years has followed the occupation of a day-labourer, was admitted into the Northampton Hospital in the month of July; states, that he has for several years past been subject to frequent and alarming fits of syncope, preceded by palpitation and pain at the præcordia. These symptoms were generally followed by an attack of dyspnoea and cough. About three months previous to his admission perceived a swelling on the right side, between the third and fourth ribs, near the edge of the sternum, which gradually increased from that period to its present state—the size of a large egg. The tumor pulsates; he has a hoarse cough; countenance livid; breathing laborious; extremities œdematous; pulse 72; and bowels regular.

During the period the man remained in the house his symptoms did not increase.—Venesection was once resorted to, and large doses of digitalis administered; but no benefit was apparently derived. After the expiration of three weeks he was made an out-patient; and two months from that period died suddenly whilst drinking tea by his fire-side.

The post mortem examination took place twenty-four hours after death. The muscles on the chest were first removed, and presented no appearances of disease; the sternum with the cartilages were then separated, and the chest laid open. The pericardium was so distended as to occupy an unusual

portion of the cavity, and the ascending aorta appeared considerably dilated. The cartilages of the third and fourth ribs were completely absorbed, as well as some portions of the bone to which they were attached. The pericardium was found half-filled with coagulated blood, from the bursting of the aneurismal sac, about two inches in diameter. The coats of the artery, within the limits of the sac, were very thin and tender; the artery above the sac was filled with coagulated lymph. The heart was unusually large and flabby, and the valves of the aorta were covered with ossific deposits. The lungs were gorged with blood, but the other viscera were healthy.

CHELTENHAM HOSPITAL*.

Nævus Maternus.

MARY LANE, æt. twelve months, was received into the hospital March 27, with a nævus situated on the right side of the nose. At the time of birth it was about the size of a pin's head, and of florid colour; it had not increased till within these last two months, since which time it has grown much larger, and now presents very much the form and appearance of a ripe cherry.

26th.—Mr. Averill passed a curved needle, with a double ligature, through the base of the tumor, and secured either half, by tying as tightly as possible. A piece of lint, dipped in cold water, was then applied, and fastened lightly by a bandage. The child took the breast immediately after the operation, and was lively the remainder of the day.

30th.—The tumor considerably reduced; a good deal of inflammation, extending towards the eye.

April 1st.—The ligatures were divided, and the nævus came off. It did not appear to be entirely destroyed, but by the occasional application of the potass. fusa, it was brought even with the surrounding surface, and healed.

I am induced to send you the foregoing case, because I consider it corroborative of Mr. Higginbottom's statement, contained in a number of the Medical Gazette for Aug. He has there related two cases, one of nævus, and the other aneurism by anastomosis, treated by the kali purum, on the plan recommended by Mr. Wardrop. I have seen Mr. Averill use the ligature in two cases, similar to the one now related, and in each case he was eventually obliged to have recourse to the use of this caustic, as he found the ligatures insufficient for the complete destruction of the nævus; indeed, it is

* From Midland Reporter, cases reported by Mr. C. Turner.

impossible to secure the whole base of the tumor by the ligatures. The application of the ligature has been known in more than one instance to have produced convulsions, and thus put the patient's life in great danger; it is therefore of importance to dispense with the ligature; and as the disease may be cured from the commencement by the use of the *kali purum*; and even when the ligatures are employed, ultimately you are obliged to use this caustic; it appears preferable to adopt the plan recommended by Mr. Wardrop, and successfully pursued by Mr. Higginbottom.

Extensive Navus Maternus.—Varicose Veins.

Anne Scarlett, æt. 23, had, at the time of her birth, a *navus*, extending in detached portions on the outside of the limb, from the posterior surface of the crista of the ilium, to the foot, as far as the point of the little toe. This, as her mother told her, was occasioned by her having marked her, in consequence of her having longed for some elder-berries during the time of her pregnancy. This *navus* had continued to grow with the growth of the patient, so that it now occupies the same relative situation as at the time of her birth. When she was about seven years of age, the veins of her leg first began to enlarge. At ten, or thereabouts, as she was walking in the garden, a vein in that portion of the *navus* situated on the outer side of the knee, gave way; her shoe was soon filled with blood, of which she lost a considerable quantity, and fainted; this bleeding was arrested by the application of fur from a hat, and pressure. From this time the limb enlarged more rapidly, and every autumn scabs formed on different portions of the *navus*, which ulcerated and bled considerably. This she attributed to elder-berries being ripe at that season of the year. At fourteen she had the first appearance of her menstrual discharge, which, generally speaking, has continued regularly always in quantity; rather profuse, and sometimes a week previous to the natural period. In this way she continued to go on, the limb gradually enlarging till the time of her marriage, which took place on the 2d of June, 1827. From the time of her pregnancy, the size of the limb increased much more rapidly; and on the outer side of the middle of the thigh, in the centre of the larger portion of the *navus*, after considerable inflammation, an abscess formed, which, on ulcerating, discharged about a teacup-full of pus, and a good deal of blood. She miscarried, after having gone about four months. Since her miscarriage, the size of the limb has somewhat diminished.

Nov. 17, 1828.—She was received into the casualty hospital under the care of Mr. Averill, and then in the state about to be described. Her general complexion is pale, that of a person who has lost a considerable

quantity of blood. The extent of the *navus* the same as already mentioned; the outer side, and part of the posterior surface of the thigh, from about the trochanter, being included in it. A considerable portion of this named surface is now in a state of granulated ulceration, which furnishes a considerable quantity of hæmorrhage every time the dressing is removed. In the *navus*, near the ankle, is another ulcer, which occasionally bleeds. Mr. Averill said that the veins of the leg generally, are in a more varicose state away from the *navus*, than any he ever saw; this, however, was not the case of those on the inner side of the thigh, which appear healthy, as does the skin and cellular tissue, as far as can be judged by the touch. The circumference of the diseased thigh is about one inch and a half greater than the healthy one. The circumference of the calf of the leg, where the veins are very varicose, is about five inches and a half greater than that of the healthy limb: the diseased measuring sixteen inches. I should here observe, that the woman was of rather slender form, and a good deal emaciated from the disease. She suffered a great deal from pain in the limb; had sleepless nights; opiates afforded but little relief; opening medicine was sometimes required; had occasional discharge of blood from the hæmorrhoidal veins; and sometimes, when sick, threw up blood with the contents of the stomach. This, which will be seen from the above statement was considered a hopeless case, is an excellent illustration of what may be accomplished by attending to the general health of the patient, with judicious local remedies. The diurnal details of this case would be as tedious as uninteresting, therefore the few remarks I have to make will occupy but a small space.

Treatment.—A mixture, consisting of a light tonic in combination with the sulphate of magnesia and sedative solution of Butley, was prescribed; by this means the appetite was improved, a gentle action kept up on the bowels, and the irritability of the stomach somewhat diminished. However, a variety of remedies were tried before any were found of service in relieving the vomiting, and after taking any medicine for a few days, it was obliged to be changed, as the stomach would not retain it. The *tr. ferri muriatis* failed in arresting the hæmorrhage from the stomach. The medicine that relieved this symptom was a mixture containing the nitrate of silver, which was ordered to be taken three times a day, together with a blister applied to the epigastric region. Blisters had been tried before, but failed in permanently relieving this distressing symptom; therefore the benefit is to be ascribed more particularly to the nitrate of silver.

Bandages were at first employed, but the

pressure made was not sufficiently even, and frequently caused so much pain (although put on but moderately tight,) that they were obliged to be removed. Mr. Averill therefore ordered an elastic stocking and thigh-piece, from Scoolbred, of London, which was found to answer the purpose remarkably well; but I should state that the thigh-piece was not used till the ulcer was healed, which was effected principally by the nitrate of silver, together with simple dressings. The nitrate of silver possessed the two-fold property of lessening the hæmorrhage and subduing the irritable state of the sore. The diet of the patient consisted of light and easily digestible food, and on her leaving the hospital, which was on the 23d of Jan. 1829, she looked remarkably well, and had gained a great deal of flesh. The thigh was reduced to the natural size of the other, and the leg very little larger, the veins of which were also diminished much in size. She was particularly directed always to wear the elastic stocking and thigh piece, as the likeliest method of keeping the disease under, besides giving support to the varicose veins, and thus give them as fair a chance as possible to recover their natural size.

Remarks.—When this patient was admitted into the house, it was under the idea that amputation was necessary; for from her emaciated condition, from the large ulcer in the nævus, by which a vast deal of blood was lost, and considerable constitutional irritation kept up, together with the general hæmorrhagic tendency of the patient, it was the opinion of all who saw her that the disease must cause her death, and the propriety of removing the limb above the trochanter, or even at the hip joint, should it have been found requisite, was generally thought to be the only means of affording her a bare chance of recovery.

It will be proper to observe that the patient was some time under the care of a surgeon, but he found medicine of no avail.

LONDON HOSPITAL.

Popliteal Aneurism.

An insane Portuguese, about forty years of age, was brought to the hospital from Pembroke House, September 6, at eight in the evening, with a supposed popliteal aneurism of an urgent nature. There was a large tumor, circumscribed at its upper part, extending from the middle of the inside of the right thigh to the inner part of the knee joint. The skin covering the swelling was discoloured, and there was a deceptive feeling of fluctuation; but no pulsation was perceived, either by the touch or by means of the stethoscope. Compression with the

hands did not in the least reduce the volume of the swelling. The whole limb below the disease was extensively œdematous, consequently the pulsation of the anterior and posterior tibial arteries could not be felt. No information of the history of the case could be elicited from the man, or those who brought him to the hospital, except that the swelling first commenced about two months back. Mr. Luke was sent for, and after examining the tumor he made a puncture with a grooved needle, from which a small quantity of dark-coloured blood escaped. The patient was then left, and a consultation appointed for the following day.

Sept. 7th.—After the surgeons had examined the case, the man was carried into the operating theatre, pressure was made on the artery in the groin, and a lancet was passed into the swelling, when a small quantity of blood escaped. Amputation was then decided on. Mr. Luke performed the operation high up in the thigh: very little blood was lost, but a great many vessels required to be secured. The patient was then carried to bed, and forty drops of laudanum in some wine were immediately given him. In the evening there was a slight hæmorrhage from the stump, which stopped after the application of an evaporating lotion.

8th.—He had passed a restless night, and was rather feverish; his pulse was quick, but feeble.

He was ordered the Mist. Salin. ter die, and a pint of beef tea.

9th.—He had slept very well, and had a moist skin; his bowels not having been relieved for two days, he took a dose of *seuna* and salts.

10th.—His bowels have been freely open, and the stump, when dressed, had a healthy appearance. He was allowed a mutton chop and a pint of porter daily.

For the first week after the operation the patient proceeded favourably, when a large slough formed on the lower part of the back, which in a few days separated, and was followed by a considerable discharge from the part. Two ligatures came away from the outer part of the stump on the twelfth day, but the femoral artery was distinctly observed to be pulsating from the groin to the extremity of the stump, which prevented the surgeon from interfering with the ligatures in that situation. There was not much discharge from the stump. His appetite still continued good, and he was allowed a pint of wine daily. After three weeks, portions of skin on the outer part of the left foot, and on the outside of the leg directly in the course of the fibula, also gave way, and his strength continued to fail daily.

Oct. 6th.—He was unable to eat his diet; his pulse was quick and small. The extre-

mity of the femur, which was necrosed, had caused ulceration of the skin covering it, and was projecting from the upper part of the stump.

7th.—He had passed a restless night, refused all nourishment except a little wine, and in the night died.

The body was not examined.

Upon dissection of the limb, the tumor was observed to consist of a cyst formed by the muscles and surrounding soft structures condensed, containing a large mass of dark coagulated blood, at the bottom of which, and nearly as low as the popliteal space, was distinctly observed the artery of the limb, with an opening nearly as large as the calibre of the vessel itself, which was surrounded by the remains of a sac with an irregular margin. The branches of the artery beyond the disease were contracted in their size, and the muscles of the leg were pale and flabby.

Elephantiasis.

James Hawksford, aged 18, short for his age, and evidently stunted in his growth, was admitted into the London Hospital, September 30th; under Mr. Headington. He was born in London, of English parents, and when three years and a half old he was taken to Trinidad by his father, who had an appointment in the West Indies. He has always enjoyed excellent health, and a good appetite, but has lived very much on salt provisions and food of a coarse kind. The disease commenced in the skin of the legs, in fawn-coloured blotches, which afterwards became of a reddish-brown tint, and elevated into flattened tubercles. Subsequently the disease appeared in the face and other parts of the body. The countenance is disfigured by tubercles, which have formed in the cheeks, eyelids, forehead, and ears; two or three tubercles are situated on the prepuce, and prevent the boy denuding the glans penis. These tubercles are hard and insensible, and the functions of the skin are completely destroyed in its diseased parts. He has never had the slightest venereal desire. A similar case was never seen by him in the island, and from his account it would appear that the medical men who saw him abroad were unacquainted with the disease, and that he came to this country for advice, after using iodine ineffectually, both as an ointment and internally. When he first applied at the hospital, the liquor arsenicalis was prescribed for him, but it was shortly discontinued, and then he commenced taking Cal. gr. ss. twice a-day. He took the calomel for some time, until his mouth was very slightly affected, when, no effect having been produced upon the disease, it was omitted. The tartar emetic ointment was then directed to be rubbed on the skin of the thighs; it excited the usual irritation,

but without remedying the disease. Blisters, which rose very readily, were employed, and with similar results.

He continued in the house until Dec. 23d, when, all the means which had been tried having failed, he was discharged, and allowed to attend as an out-patient.

WESTERN DISPENSARY,

CHARLES-STREET, WESTMINSTER.

Sciatica of twelve years standing—Cured by Acupuncture.

DOROTHY ROBINSON, æt. 74, was placed under the care of Dr. Lilburn, on the 10th August 1830. The patient reports that she has been subject to rheumatism of the right hip-joint for the last twelve years. The pain, she says, is at times almost intolerable, particularly when she gets warm in bed, or on any change of the weather. There is no swelling, or redness, perceptible about the joint; appetite greatly impaired; bowels regular.

Pulv. Ipecacuanhæ Co. gr. x. omni noct. sumend.

Pulv. Rhei et Magnesiae, aa. gr. vj. M. ft. Pulvis primo mane sumendus, pro re natâ.

September 10th.—She has persevered in the above medicine till this date without any permanent benefit.

R Vini seminum Colchici, gtt. xv. Aquæ, ʒj. M. ter indies sumend.

Cont. Pulv. Catharticus. Omit. Pulv. Ipecac. Co.

R Lin. Saponis Co. ʒij. Olei Terebinth. ʒj. Tinct. Opii, ʒss. M. ft. Linimentum parti dolenti, ope frictionis, sæpe applicandum.

20th.—Pain not much relieved; the bowels relaxed.

R Vini sem. Colchici, gtt. xx. Aquæ, ʒj. M. ter indies sumend.

Cont. Linimentum et Pulv. Catharticus pro re natâ.

30th.—No improvement.

R Vini sem. Colchici, gtt. xxiv. Aquæ, ʒj. M. ter indies sumend.

Cont. Linimentum.

October 10th.—The mixture causes violent purging; the complaint, however, does not appear to be at all alleviated.

Cont. Mistura et Linimentum.

26th.—The purging ceased after two or three days; the disease is not in any degree relieved.

R Vini sem. Colchici, ʒss. Aquæ, ʒj.
M. ter indies sumend.

Cont. Linimentum.

30th.—Complains of the pain being as bad as ever.

Cont. Linimentum et Pulv. Cathart.
Omit. Mist. Colchici.

November 26th.—Still complains of intense pain, although not quite so bad as when she was first admitted. This day acupuncture the hip was had recourse to, and three needles, each one inch and a half in length, were used for the purpose, when the pain was entirely removed. The emplast. ammoniaci c. hydrargyro was applied to the joint, and the liniment directed to be used frequently to the parts adjacent. The bowels are naturally relaxed.

Dec. 3d.—No medicine has been used internally since the last report, nor has there been any return of pain whatever; she sleeps comfortably, and the appetite is greatly improved.

Cont. Linimentum.

14th.—Has had no return of sciatica, and only a slight stiffness of the joint remains; is troubled with a catarrh, which she has been a long time subject to occasionally.

R Tinct. Opii Camp. Oxymel Scillæ, aa.
ʒj. M. cochlear parvum ex aquâ urgenti tusse sumendum.

Cont. Linimentum.

18th.—The stiffness of the joint and catarrh have quite left; her appetite is good, bowels regular; she sleeps well, and is able to walk without inconvenience.

21st.—Attended at the dispensary; feels well in every respect.

Discharged cured.

Dec. 27, 1837.

STOMACH ALMOST ENTIRELY CONVERTED INTO CARTILAGE.

A WOMAN had had a tumor in the abdomen for twelve years; it was moveable, of a round shape, and had been unanimously declared by several medical men, who had examined it, to be a scirrhus ovary. This patient, who had never had nausea, vomiting, nor any of the other symptoms by which scirrhus of the stomach is usually indicated, at length died, and on opening the body it was found that the tumor was formed by the stomach converted into cartilage, which was an inch thick on the anterior surface, and it was only at the posterior part that a small membranous portion was discovered, less indurated and not so thick. The cartilaginous parietes of the viscus could not have performed any movement, and

it would thus appear that motion on the part of the stomach is not essential to digestion. The preparation is deposited in the Royal Museum of Berlin.—*Rust's Magazin.*

NOTICES.

Mr. Smith's former note could not have been sent to the proper quarter: we have never had reason to suppose that any thing, addressed to the Publishers failed to reach us. The notice, as sent, is an advertisement.

Dr. M. Hall's communication next week.

We have to apologize to Dr. Rigby for the accidental delay of his paper. We shall give it next week.

Mr. Dewhurst's paper is left for him at the Publishers'. We thank him for his Table of the Sutures.

The Biographical Notice of Dr. Magennis came too late for the present Number.

LITERARY INTELLIGENCE.

The Medical Annual; containing a practical estimate of the Therapeutic Value of all the Remedies which have been introduced into the Practice of Medicines within the last ten years; an Account of the Mechanical Auxiliaries to Medicine; a Priced Catalogue of Drugs; and a list of Diseases, with References to the Remedies that have been found most beneficial in their Cure or Palliation.

BOOKS RECEIVED FOR REVIEW.

Observations on Mental Derangement: being an Application of the Principles of Phrenology to the Elucidation of the Causes, Symptoms, Nature, and Treatment of Insanity. By Andrew Combe, M.D.

A Manual of Surgery, founded upon the Principles and Practice lately taught by Sir Astley Cooper, Bart. and Joseph H. Green, Esq. Third Edition. By Thomas Castle.

Bethlem Hospital.—Minutes of Evidence taken by the Committee appointed to inquire into the Charges preferred against Dr. Wright, &c.

A New Mode of Ventilating Hospitals, Ships, Prisons, &c. being an efficient Method of destroying Contagion, and of preventing the spreading of Infectious Diseases. By George Hawthorne, M.D.

Anatomical Demonstrations; or Colossal Illustrations of Human Anatomy. By Professor Seerig. Translated from the German.

Selections from Gregory's *Conspectus* and *Celsus de Medicinâ*. By S. F. Leach.

An Introductory Lecture to the Theory and Practice of Midwifery. By Thomas Greening, M.D. Second Edition.

Two Lectures on the Study of Anatomy and Physiology. By Jones Quam, M.B.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

SATURDAY, JANUARY 8, 1831.

LECTURES
ON
COMPARATIVE ANATOMY,
AS ILLUSTRATIVE OF
GENERAL AND HUMAN PHYSIOLOGY,

*Delivered in the Medical School of
Birmingham,*

By S. LANGSTON PARKER.

LECTURE VII.

Of the Sense of Taste in different Animals.

GENTLEMEN,

It will be recollected that in our preceding lecture we commenced the consideration of the organs of the senses, and offered some remarks upon the anatomical disposition of the skin as subservient to the sense of touch. We divided the senses into general and special, describing touch as the general, and the remaining four—taste, smell, sight, and hearing—as special senses, being possessed by certain parts of certain animals only, and not by all parts of every animal as the sense of touch. The special senses are only modifications of the general sense, considered both under an anatomical and a physiological point of view, as we shall perceive by their regular gradation of complexity from touch to hearing—from the most simple to the most compound sense. These organs being devoted to the ascertainment of particular properties of bodies, it is evident that they must be modified in a manner fitting to put them in relation with the property of the body to be perceived; and these modifications are either mechanical or chemical, *i. e.* a mechanical or chemical agent must be placed between the pulpy extremity of the nerve and the body from which we wish to ascertain the property, which agent shall judge of the nature of that property, which is subsequently transmitted by the nerve to

the brain. The chemical senses are taste and smell; the mechanical are touch, vision, and hearing. Taste and smell are termed chemical senses by physiologists, because their action resembles, in some measure, that of a chemical test; by which they are enabled to discern the qualities of the intimate composition of bodies, and under this point of view their functions are directly opposed to those of the mechanical senses of touch and vision, which judge of the properties of bodies in the state wherein they are presented to us by nature. The action of the auditory sense does not immediately relate to individual or single bodies, but to the action of these bodies or their parts (which are then separate bodies) upon each other. Most physiologists, in dividing the senses according to their action, into chemical and mechanical, have applied these terms to the mode of operation of the sense; I think, however, it would be more judicious to limit these terms to the nature of the properties or qualities to be judged of, instead of applying them to the mode of action of the organs of the senses, since these actions are purely vital, and exercised in a manner which neither chemistry or mechanics can explain. Though the property of any body be acquired by the organ of a sense, it remains inert, with regard to the individual, unless made manifest to him through the medium of the nervous agent; and a question here naturally arises, whether there is not some special or peculiar organization in the structure of the sensitive nerves themselves, which enables them to transmit these varied properties, since their actions are so widely different from the other nerves of the economy, and from each other?

Upon this subject much difference of opinion exists; some anatomists, as Cuvier, considering the nerve to derive its peculiar sensitive property alone from the organ in which it is distributed*; whilst others, as

* Cuvier, *Leçons d'Anatomie comparée*, t. i. p. 104, et suivantes.

Dr. Blainville, conceive the various actions of the nerves of the senses to be owing to the special organization of each nerve*. The truth seems to rest between these two opinions; viz. that the action of a sense neither depends exclusively upon the mechanical organization of the sense, nor upon the nervous agent, but partly upon both. The external apparatus appears more immediately adapted to place the property of a body in a state to be perceived, whilst the nerve receives and transmits the perception to the brain. Thus, the expansion of the optic nerve in the retina gives the sensation of light, whilst the form of bodies is only ascertained by the optical apparatus before it; persons who have suffered from organic diseases of the eye, in whom the cornea has been rendered opaque, in consequence of the cicatrices of ulcers, distinguish accurately the situation, and the presence or absence of light, but are totally unconscious of the form of the body from which it emanates or is reflected. The mechanical apparatus of a sense, placed before the nervous agent of that sense, is then more immediately designed to render its operation more active. The ordinary integument makes us sensible of the presence of a body by mere contact, but it is only when the skin is spread over an organ peculiarly modified for the examination of the various parts of a surface, that we are aware of the true form and disposition of that body. In the special, as in the general senses, two points more particularly claim our attention; 1st, the mechanical apparatus of the sense; and 2dly, its nervous agent. The special senses may be again divided, from their anatomical disposition, into two series of organs; 1st, those which offer us merely a modification of the skin, and are composed of a number of superposed parts, which thus form a membrane, which is, strictly speaking, nothing more than a simple modification of the skin. These senses are taste and smell, which are the most general and simple of the special senses, in which also the nervous agents are not strictly special, since these organs are supplied by more than one nerve, each of which, it is supposed, contributes in some measure to the energy, activity, and integrity of the sense. The remaining senses of sight and hearing are more complicated in the acoustic and optical instruments, which place the properties of sound and light in a condition to be perceived or ascertained; they are likewise remarkable for the singleness of function in the nerves which supply them. The senses of taste and smell are the most general under another point of view, since they are first met with in ascending the series of animals, and are likewise soonest perfected in the young animal. In our exposition of the senses, we shall consider them according to the degree of anatomi-

cal complexity necessary in the organ to make us sensible of the property to be perceived, proceeding from the most simple to the most compound: thus, taste is the most simple of the special senses in the anatomical structure of its organ, as it most resembles the disposition of the general sense of touch in the organization of its membrane, and the number of nerves distributed to it, which are here three, whilst in the remainder of the senses they are diminished gradually to one. There is some difficulty in ascertaining the true nature of the complexity of a special sense; for we find, that as the external or mechanical apparatus becomes more complicated, the nervous agent is more simple; this is exemplified in the tongue and in the eye. It appears, however, that the degree of nervous complexity depends upon the number of other functions which the sensitive organ has, at the same time, to fulfil: thus, the tongue, besides being the organ of taste, is provided with the function of ordinary sensibility, and has likewise a motive power; it has consequently three nerves; the eye, on the contrary, considered simply as an organ of vision, is possessed of one only. Considering the sense of taste to be the most general of all the special senses, we shall commence our remarks upon them with it.

This sense may be defined as an apparatus, more or less complicated, by which the animal is enabled to perceive external bodies through the medium of one of their properties, termed savour or sapidity. By it we ascertain, not only the existence of the body, in a similar manner to that exercised by the ordinary integument, but we penetrate into its intimate composition, in discerning, through the medium of its savour, the effect that it may produce upon us; and hence the organ of taste is most judiciously placed at the entrance of the nutritive apparatus of the animal. From this disposition we must be aware of the generality and importance of this sense in all those animals which seek for and choose the materials of their nutrition, and especially in those who masticate it. In those species, on the contrary, which swallow it in a state of solution or suspension, the gustatory sense is imperfect or null. It is not easy to ascertain in what manner we are made acquainted with the sapid properties of bodies, but it is probable that the action of this sense is, as we have said, strictly chemical; i. e. that the sensation is not the result of a vibration communicated to the pulpy extremity of the gustatory nerve, which takes place in the senses of audition and sight, but dependent upon some change in the body when become sapid, or in the fluids which render it so, as without solution no taste could be perceived. We are only made sensible of those properties of bodies which are termed sapid through

* *Principes d'Anatomie comparée*, t. i. p. 240.

the medium of the organ of taste, and as no body can be rendered sapid without solution, it is evident that the degree of taste will be more perfect and effective as the fluids distributed over the organ are more powerfully soluble and in greater abundance. The perfection of the exercise of this sensitive property immediately depends upon the following particulars:—1st, upon the size and volume of the nervous system of transmission, or gustatory nerves, which are distributed to the organ; 2dly, on the development and nudity of the terminating nervous papillæ, which are in strict relation with the former disposition; 3dly, upon the extent and degree of tenuity of the gustatory membrane, or that portion of it which is organized by the true gustatory nerves; 4thly, on the quantity, and also upon the nature, of the dissolving fluid poured or secreted upon its surface.

The general modifications which the membranous envelope of the gustatory organ presents, are in the thinness and spongy nature of the dermis, which is intimately connected, and almost confounded with the muscular mass constituting the substance of the tongue. The rete mucosum and its pigment are hardly discernible, though we conclude from analogy that they exist. The epidermis is also remarkably thin. The development of the mucous cryptæ, or follicles, is considerable; and from this source is principally derived the fluids which concur in keeping the surface of the tongue constantly moist, and in furnishing a great proportion of the solvent power necessary to the discovery of the sapid properties of bodies. Thus, to constitute a perfect organ of taste, we must have the papillary terminations of the gustatory nerves large and numerous, the membrane covering them thin, so that the sapid particles may be easily and copiously applied to them, and the dissolving fluid upon the surface of the organ abundant and powerful. In all animals, analogy leads us to believe that the seat of taste (*properly so called*) resides in the tongue; but as this organ is devoted to the fulfilment of other functions, as deglutition, mastication, and the formation of words, or speech, we shall consider only that department of its anatomy which is essentially appropriated to the distinction of savour, which property is found exclusively in the anterior and lateral part of its investing membrane. The muscles which form the substance of the tongue are surrounded by a large proportion of cellular tissue, and are covered by a tegumentary membrane, which is continuous with that of the other parts of the interior of the mouth, and with the common integuments of the body on the borders of the lips. The peculiarity of this membrane in the mammalia arises, as we have said, from its extreme softness and spongy texture, and the extraordinary development of the papillæ on its

surface, both as it regards their number and volume. The papillæ on the surface of the tongue are threefold in their nature and appearance, and likewise widely different in their mode of action. The most numerous are those which are termed the conical papillæ*, so named from their form, which resembles that of a small cone; they are of two kinds: one which is flexible, soft, pulpy, and minute, occupies the sides and point of the tongue. Towards the centre of the organ these papillæ become larger, firmer, and more acute; their apex divided into several points, and clothed with a firm epidermis. The whole of these papillæ are generally considered to be nervous. The second species is termed fungiform, likewise from its disposition, being a spongy granulated body surmounting a small pedicle, and strictly analogous in their appearance to growing mushrooms (*hence their name fungiform papillæ*). They are much less numerous than the conical papillæ (among which they are disseminated): at the apex of the tongue they are found in greatest number. It is probable that these papillæ are also nervous. --The third kind of papillæ (improperly so termed) are the calyxiform, which are hemispherical masses of mucous cryptæ, situated on the base of the tongue, in the form of the letter V, the apex of which is turned toward the pharynx; they are frequently called by anatomical writers calyxiform glands, which name indicates much more clearly than the former their true nature and functions, which are strictly glandular. These glands, or cryptæ, are met with in a determinate number, varying in each order and species of the mammalia.

The accessory parts of the gustatory apparatus, which render the process more perfect and effective, are salivary glands; which, by their secretions, tend to facilitate the solution of the nutrient body, so that its sapid properties may be more effectively and more immediately ascertained. The teeth, by masticating and tearing solid bodies, and thus admitting the dissolving fluid to more points of their surfaces, likewise assist in perfecting the gustatory sense: the detail of the disposition of these organs, however, will be more properly considered with the digestive apparatus, with which they are, perhaps, more intimately connected. Man offers the distinctive characters of the most perfect organ of taste. The tongue is large, flat, and globular; and well developed in those parts which possess most motion. The membrane covering it is extremely thin, the vascular system abundant, as evident from its red colours, and the pigment altogether wanting, even in the negro and all the other varieties of the human race. The conical papillæ are soft and

* De Blainville, loc. cit. pp. 250 and 251.

minute; the fungiform papillæ extremely numerous, especially at the point of the organ, and the calyxiform or calycinal glands amount in number to ten. The disposition of the organ in the quadrumana, or apes, is nearly similar; the anatomical structure presents a strict analogy; the papillæ bear a striking resemblance, but the calyxiform glands are less numerous, varying in the different species from nine to one. The carnivora present us with some peculiarities in the form and structure of the conical papillæ, a certain quantity of which only are exceedingly developed, and provided with a pointed and thick epidermoid covering; the points of these papillæ being directed backwards. The object of this disposition appears to be to enable the animal, by licking his prey, to lacerate it in numerous points of its surface, by which the contained blood may be more completely evacuated and spread over the gustatory surface of the softer papillæ. The structure is likewise apparent in the "*vespertilio caninus*;" the erroneously termed vampire bat of the East Indies and New South Wales; this disposition of the papillæ enabling it to lacerate the skins of fruits upon which it exclusively feeds, and thus more readily to obtain the juice. The animals which are deprived of teeth, as the different species of ant-eaters, the chameleon, and others, have the gustatory membrane remarkably smooth, and covered with a thick coating of glutinous matter, designed, in all probability, to retain the insect upon it.

The varieties of the ruminantia and bisulcus animal's, or those with a divided hoof, and likewise those with a single hoof (the solipeda of Cuvier), present us with numerous varieties in the gustatory organ, which are evidently in strict relation with their diversity of food. In the ruminantia, the conical papillæ which cover the anterior part of the tongue, are numerous, fine, and compact; each terminated by a horny filament directed backwards: these filaments are hardly discernible without the aid of the microscope. The posterior and central elevated portion of the tongue, which in these orders is always very much developed, is covered with hemispheric tubercles of unequal size, which bear some analogy to the calyxiform glands, or papillæ. These large pointed papillæ, as well as the horny points of the conical ones, seem designed to retain the herbaceous food on the surface of the gustatory organ;—they may likewise be the seat of some prehensile power, assisting the animal in seizing his aliment. Some varieties in the apparatus of taste are found also in the aquatic mammalia, which appear to relate rather to the medium in which they live than to the kind of substance upon which they are nourished: most of the aquatic orders of this class, as the seals and

cetacea, having a smooth epidermoid tongue, entirely destitute of papillæ.

In the class aves the tongue is widely different from the analogous organ in the mammalia: its internal structure varies in possessing a bone which is articulated with the body of the os hyoides. Its muscular apparatus must be likewise different, since the tongue is only moveable in its totality, and not individually in any of its parts. The skin or gustatory membrane is different from that of the mammalia generally, and though the proportion of nerves and arteries distributed to it are in this class considerable, still we are not led to suppose that the tongue of birds is an organ possessing generally the sense of taste, even in an ordinary degree. The dermis is remarkably dense and compact, rarely having any papillæ developed on its surface, which is most commonly smooth. Blainville regards the denticulated or bifurcated points of the tongue, in some birds, to be similar in function to the nervous papillæ of the mammalia, as these parts are manifestly provided with voluminous nerves. The osseous or cartilaginous points which surround the tongue in certain orders, appear to facilitate the act of deglutition. There are, however, some striking differences and peculiarities in the various orders of the class aves, which relate, as in the mammalia, to the variety of their nutrient substances, and to the mode of their prehension. Thus the species which masticate their food, as the parrots and other leviostres, have a thick fleshy tongue, with the rudiment of nervous papillæ: the sense of taste is evidently more manifest in these tribes than in any other of this class. The accipitres have a large, fleshy, smooth, and moist tongue; and in them probably the sense of taste is also moderately developed. In the class passerres, or hard bird-billed birds, and in those of the pie kind, as the crow, rook, and jay, there appears to be little variety in the disposition of the tongue, considered as a gustatory organ, it being in all these orders thin, dry, and hard. In many of the aves the tongue, or rather its appendices, present a complicated and curious mechanism, which render it a most perfect organ of prehension. These dispositions are particularly manifest in the woodpeckers and grouse; in the former of whom a pair of long elastic cartilages protrude the tongue to a certain distance, enabling it to seize flies and insects. In the cock of the woods a complicated muscular apparatus is present, for the same purpose. The chief varieties of the disposition of the gustatory portion of the tongue in the reptilia, relate to the mode in which the food or prey is swallowed: if it be retained a moderate length of time in the mouth, which is the case in the tortoises, or chelonian, the tongue is large, smooth, and fleshy, and covered

with numerous papillæ. Those which swallow their prey instantly, or bolt it, to speak more familiarly, as the crocodile, have but a rudiment of the organ, which is small, scaly, motionless, and adherent to the parietes of the mouth. The tongue of the chameleon, as a prehensile agent, displays a very curious mechanism: it is contained in a sheath at the lower part of the mouth, and has its extremity covered with a glutinous secretion; it admits of being projected to the length of six inches, and is used in this manner by the animal in catching its food, which consists of flies, &c. It is darted from the mouth with great celerity and precision, and the viscid secretion on its extremity (which is cup-shaped, and capable of containing a large portion of fluid) entangles the small animals which constitute its food*. There is likewise a peculiarity in the tongue of the common frog, considered also as a prehensile agent: the anterior extremity of this organ is, unlike all other animals, adherent to the inferior jaw; the front border is free, and is turned forwards out of the mouth when the animal endeavours to seize its food†. In the last class of the vertebrata, the gustatory portion of the tongue is merely rudimentary, whilst that portion of it immediately attached to the os-hyoïdes is largely developed. This is rather an organ of prehension than one of taste; which property in the pisces is at its minimum of development. Thus we see that the tongue, as a gustatory organ, gradually diminishes in its importance, from man to the quadrumana, aves, reptilia, and pisces; undergoing those modifications which are dependent upon the difference of the aliment, and also upon the mode of its prehension;—that part of the tongue which is essentially the seat of taste being the anterior and free portion not attached to the os-hyoïdes. In the mammalia this is most developed; in the three inferior classes the hyoïdean portion is predominant. The papillæ of the tongue, in which essentially reside the sense of taste, are supposed to be intimately composed of the capillary termination of the nerves combined with those of the arterial and venous capillaries and the exhaling and absorbing vessels; the tenuity of these is however such, that little certainly can be known of their true disposition. We have alluded, in a former part of our lecture, to their varieties. An important and controverted question arises here—viz. that of ascertaining in which nerve of the tongue (since, in the mammalia, it is supplied by three) the true sensation of taste resides; the nerves attributed to the tongue being, as you well know, the lingual branch of the fifth, the eighth pair,

or hypoglossal, and the glosso-pharyngeal, together with branches from the superior maxillary, and from the spheno-palatine and naso-palatine ganglia. Galen*, Vesalius†, Willis‡, and Haller§, with anatomists generally, have regarded the branch of the fifth nerve to be the special nerve of taste, conceiving that this was particularly distributed to the papillæ, whilst the ninth and glosso-pharyngeal nerves were more specially destined for the muscles, and were consequently motor nerves. The hypoglossal, or eighth pair, does not exist in the pisces, and therefore cannot be the nerve of taste, as was supposed by Boerhaave. This remark likewise supports the first opinion—that the fifth pair is subservient to taste. We may certainly infer that the ninth nerve is not productive of taste, since it does not exist in the pisces, the serpentina, the batracia, or frogs, and the birds; neither in the chameleon and a few other reptiles. It may be safely assumed that this is the motor nerve of the tongue, both from its insertion upon the spinal axis and its disposition in the mammalia, in which class alone the motions of the tongue are so extensively varied. The number and celerity of the motions of which the tongue is susceptible, whether for the exercise of voice or mastication, or for the direct prehension of aliment, are in direct ratio with the size and development of this nerve. Thus it is larger in the carnivorous than in the herbivorous animals. Its correspondence with the extent of motion in the tongue, and its absence where motion is limited and null in the classes I have enumerated, render the action of this nerve almost certain; since in the individuals which possess to a great degree the motive powers of the tongue, as the woodpeckers and chameleon, there is a distinct apparatus for its performance. Boerhaave described the ninth nerve to be that of taste, because he considered that being a special sense it should possess a single and special nerve for its action; whereas the glosso-pharyngeal and lingual nerves are but minute branches of an extensive and complicated system. In the present day it is generally believed that the sense of taste resides in the lingual branch of the fifth pair. Richerand, by the application of galvanism, discovered that this nerve excited less the muscular movements of the tongue than the hypoglossal and glosso-pharyngeal nerves, and consequently concluded that its distribution was more particularly in the papillæ of the gustatory membrane||.

* De Animâ Brutorum. London, 1684.

† Elementa Physiologiæ. Lausanne, 1757, 1766.

‡ De Usu Partium.

§ De Corporis Humani Fabricâ.

|| Nouveaux Elémens de Physiologie. Paris, 1825.

* Blumenbach's Manual, by Lawrence. London, 1827, p. 269.

† Blumenbach, loc. cit. p. 209.

It will be recollected, that in our exposition of the anatomy and physiology of the fifth pair, we asserted that this nerve was the most generally distributed in the animal kingdom; there being no animal possessing a distinct ganglionic nervous system, that is not provided with it. It exists in all animals superior to the vermes. The sense of taste also is the first met with in ascending the series of animals, and is therefore the most general special sense; consequently this nerve must be productive of the sense of taste in those invertebrate animals which have no other distributed to their gustatory organ. In its most primitive condition in the lower animals, the nerve consists only in the lingual branch, and its volume is generally in relation with the organ of taste and those of mastication. From these facts we may, I think, infer that the lingual branch of the eighth is most probably the nerve of taste; though this is yet a matter of controversy. We have said that the sense of taste was the most general of the special senses: Dr. Blainville conjectures that it is not sufficiently isolated, or particularized, to have an isolated nervous system for its animation; and consequently supposes that the three nerves of the tongue concur equally in taste as the posterior roots of the spinal nerves are all equally productive of touch. As the membranous apparatus of a sense (continues this distinguished anatomist) is more extended, it should be provided with an increased number of nerves distributed to the papillæ. What seems to favour the opinion of the three nerves concurring in an equal manner to the sense of taste, is that there is no special ganglion in the brain for the reception of the sensation of taste, as there is for that of the other special senses of smell, hearing, and sight, which ganglia we have minutely and particularly described in preceding lectures.

I believe that it is more rational to suppose that, as the actions of any organ become complicated and extended, the number of nerves distributed to that organ should be proportionally increased; and as in the mammalia this is found to be the case in the tongue, which in them is a vocal, a masticating, and a prehensile organ, and likewise an organ of taste, we may expect to find that nerves will be added to support these different actions; and from what we have seen, though the actions of each may not be strictly and certainly ascertained, it seems probable that the fifth nerve is the transmitter of the gustatory sense.

Cuvier is of opinion that it is difficult to ascertain which nerve is the special organ of taste, since the anastomoses of the three are so numerous in the substance of the tongue that it is impossible to tell which nerve sends filaments to the papillæ. It ap-

pears, likewise, that the fungiform papillæ are those in which the sense of taste immediately resides, since they receive the largest branches of the nerves, which may be traced into them by the naked eye. These parts are, in addition, always moist, and destitute of any epidermoid appendices—as those having points of the conical papillæ which we have seen existing in various animals, particularly the carnivora. Such are the anatomical facts relating to the apparatus of the gustatory sense. I would remark, however, that the different glands which pour their secretions upon it, or in its vicinity—the cavity of the mouth and the maxillæ—may likewise be indicated as dependencies of the organ; as these parts, by triturating and dissolving the aliment, reduce it to those physical conditions favourable, if not indispensable, for its action upon the papillæ. We shall now offer a few remarks upon the physiological taste in man and animals, and the extent to which it is probable the perfection of the action is carried in each.

The cause of the action of the impression is, in taste, as in the general sense of touch, the contact of a foreign body upon the surface of the tongue, or upon the skin*. The sapid body being applied to the surface of the gustatory membrane, the latter undergoes a vital process, which constitutes the action of impression, precisely the same as in the action of the organs of the sense of touch. It is necessary, however, that the period of contact should be extended beyond that of sense of touch, since the function of taste is not developed so immediately, and the sapid properties of bodies cannot be ascertained unless they be previously totally or partially dissolved. From this fact we see the importance of mastication (as accessory to the perfection of taste), which divides and triturates the solid alimentary body, and submits its component molecules to the more extended action of the dissolvent juices, and the latter to the surface of the papillæ. It does not appear, in examining the series of animals, that fluidity of bodies is absolutely essential to their taste, since birds who possess a dry tongue and horny beak may be supposed to taste, as they make choice from among a variety of seeds of those which are most pleasing to them. The contact of the sapid body upon the tongue being effected, the gustatory organ receives the impression, which is transmitted by the nerves to the brain, and gives us the idea of the presence and varieties of savour. We are, and must remain, absolutely ignorant of the manner in which the sense of taste is effected; we never can ascertain what action is performed by the nerve, or what change is undergone in it, by which it is enabled to discover the sapid particles of bodies, and no other. We

* Adelin, Physiologie de l'Homme, t. i. p. 304.

denominate it, generally, a vital or organic function, by which we endeavour to conceal our ignorance, being totally unacquainted with the manner in which these functions are exercised. A vital or organic function is that process carried on during the life of an animal, which, in its exercise, bears no analogy to the actions of chemistry or physics. We have said that it is in the papillæ that the sense of taste immediately resides, all the other parts of the membrane of the tongue merely serving to favour the contact, and to limit it within due bounds. The clorion gives to this membrane the solidity necessary to enable it to support without injury the impressa. The numerous extralantals which open at its surface simultaneously preserves the moisture of the papillæ, and facilitates the solution of the sapid body. The action of the calyxiform glands is similar; and these organs are subservient also to the other actions of the tongue, by covering the alimentary matter and facilitating its passage into the pharynx. Hence the situation of these glands at the base of the tongue, and that of the fungiform papillæ at the point, where taste is most developed. The spongy or pulpy extremity in which the nerve terminates, in the papillæ, assists greatly the penetration of the liquid in which the sapid property is dissolved. It may be compared to the action of a common sponge, imbibing mechanically the sapid particles.

This sense, taking cognizance of the elements about to pass into the stomach, may be strictly considered a sentinel placed at the entrance of the digestive cavity. In the first place, its organ is placed in the first cavity of the digestive tube, so that all food must necessarily affect this sense in its passage. The primitive acts of digestion, as mastication, insalivation, and deglutition, cannot operate without the concurrence of taste, being so many proofs that these functions are all subservient to the same end, namely, that of nutrition; consequently this is the most general sense in the animal kingdom, that of touch only being excepted. On the other hand, the most intimate connexion unites the sense of taste to all the other actions of the digestive apparatus.

It is more immediately with the stomach, considered as an organ of digestion, that the sense of taste appears to be allied. Thus, in the series of animals, the taste finds those natural substances agreeable which are assigned by nature for materials of nutrition to these animals; and, on the contrary, the gustatory organ rejects those which are hurtful or poisonous to the economy. According to this view, taste varies in the animal kingdom in the same degree as aliment, different animals finding the same substance at once pleasing and disagreeable. Again, if the internal sensation of hunger is produced by a want of aliment, the taste becomes at the

same time more acute, and the fungiform papillæ more developed; and in proportion as hunger is appeased, the sense of taste is more obtuse and inert. If the stomach be affected by disorder or disease, and the sense of hunger is not awakened, taste participates in these varieties, and does not find any sapidity in bodies, or judges of their savours falsely. Taste in all animals inferior to man may be termed the sentinel of nutrition, placed at the entrance of the digestive canal to examine all substances presented for admission—to reject those which are hurtful, and admit those which are salutary and beneficial.

In man this sense (as an organ of nutrition) is under the direction of the reasoning powers; in him the sense of taste is extremely delicate, and, according to the opinion of Richerand, would be in him most perfect, from the physical disposition of its organs, were it not early impaired by strong drinks, spices, and all the varieties of epicurean luxury. Physiologists have declared, that the size of the nerves and papillæ, and the moisture and tenuity of the membrane of the tongue, rendered the sense of taste in man perfect. Undoubtedly many animals are beneath him with respect to the development of this sense, as the birds with a horny tongue, and the pisces who swallow their prey generally without mastication; but, on the other hand, many appear to be superior to him, if we may judge from the extent of the tongue, the fineness of the epidermis, and the number and size of the papillæ. If no animal has the tongue so moveable as man, which in itself is an essential requisite of taste, it is because in man alone it is designed for the faculty of speech. It is certain that the taste of the human subject is less to be depended upon as a guide in the choice of nutriment than in animals, for whom it acts by an unerring instinct, more perfect as they are more inferior in the scale. It is frequently deceptive in man. It appears that in this point of view, as in many others, nature abandons us to the direction of our intellectual faculties, and by depriving us of perfection in many of our special senses, wishes in a new manner to develop and unfold their power.

Again, it is probable that in each species of animal, and in each individual of the human race, the nerves of taste have a special and peculiar organization, which determines not only the degree of delicacy in the sense, but which, in different individuals, discovers different sapid properties in the same substance*. We know that a body which is savoury to one animal is insipid to another—that a substance agreeable to one person is nauseous to a second. Thus, we suppose that these varieties are owing to a special

* Adelin, loc. cit. p. 514.

organization in the nerves of taste; but what the varieties are in which this organization consists, it is impossible to characterize, for we cannot even form a conception of it.—Three circumstances appear to explain the difference of taste presented by different individuals:—first, the special organization of the nerves of taste, which it is impossible to appreciate; secondly, the varieties in the physical condition and constitution of the tongue, which may be easily ascertained; and, thirdly, the observance of certain precautions, which tend to preserve the tongue in that state necessary for the healthy performance of its functions.

It appears from a comparison drawn between the sense of taste in man and animals, that the latter possess the function in greater perfection than the former. We remark, however, that the taste of animals has none of that delicacy remarkable in the like sense in man. This delicacy explains all the researches which man has recourse to in the choice and preparation of food. The gustatory sense of the human subject possesses a nicety of action not met with in animals, in whom, on the contrary, the power and extent of this faculty become especially remarkable; delicacy being the predominating feature of the special senses in man, and power and force of action the overwhelming characters of the same organs in animals.

From what we have seen of the anatomical disposition of the organs of taste in man and animals, we shall be better able to explain some points which have hitherto been controverted, or but imperfectly understood.

It is evident that the true gustatory sense resides in the fungiform papillæ, which are met with in greatest number on the apex and sides of the tongue in man and the more perfect animals. These papillæ are uniform in their structure throughout the whole animal kingdom, being remarkable for the thin and delicate epidermis which covers them, and for the size of the nerves which they receive (manifestly branches of the fifth pair). The conical papillæ likewise receive nervous filaments; but from their diversity of structure it is certain they must be designed for another office than that of taste. These organs in many animals, as the ruminantia, carnivora, *vespertilio caninus*, &c. &c. have a thick, pointed, epidermoidal covering, which renders them unfitting for the ascertainment and distinction of savour, but well adapted for the purpose of retaining the food upon the surface of the tongue, to which use they are exclusively appropriated in the animals we have mentioned.

It is evident that Warthen was mistaken in placing the sense of taste in the calyxiform papillæ or glands, which organs secrete

fluids accessory to the performance of deglutition; their use becomes unequivocal in those animals which bolt their prey, or swallow it without mastication, as the carnivora, certain pisces, and the accipitres; their sole action here being to lubricate the fauces, and facilitate the passage of the aliment.

All the physiologists who place the seat of taste equally or generally in all parts of the tongue, were likewise unacquainted with its true anatomical disposition, and concluded on the functions of this organ too precipitately, having studied it in a few animals only; such are Banlin, Bartholin, &c. &c. The true action of each order of papillæ we have truly ascertained, by examining them in the series of animals.—

The fungiform being alone true gustatory organs, the conical accessory prehensile agents, and the calyxiform, strictly glandular.

As we have proved the fungiform papillæ to be the principal organs of taste in man and animals, it is evident that the part of the tongue in which they are most numerous must be best adapted for the discovery and distinction of savour. This in man and the higher animals we find to be the anterior and lateral portions; the tongue, as an organ of taste, diminishing in force of action as we descend the series of animals, from man to the inferior classes.

We likewise infer that the sixth, in all probability, is the only nerve of the tongue concerned in the sensation of taste, since it is met with in all animals who possess this organ, whilst the glosso-pharyngeal and the ninth pairs are distributed to the muscles only, as the former is absent in the pisces, serpentina, and batracia, and the latter in the pisces, serpentina, batracia, and aves.

AN
HISTORICAL ANALYSIS
OF THE
ENGLISH MIDWIFERY FORCEPS.

BY EDWARD RIGBY, M.D. F.L.S.

(Read before the Medical and Chirurgical Society.)

WHEN we see what a lively interest has been always shewn by the members of the medical profession respecting the history of the various surgical operations and instruments, and what praiseworthy zeal has been displayed in the laborious, and occasionally fruitless researches, to determine the dates of their invention, and various successive alterations and improvements, it must surely appear rather remarkable, and to me it seems almost inexplicable, that

* Rullier, in Dictionnaire de Médecine, t. xi. Art. Homme.

the history of the present English midwifery forceps should have excited so little interest as to have attracted the attention of scarcely any of our chief professors in this branch of practical medicine. The more so, as in point of interest, there is perhaps no other instrument that can boast of having undergone so many alterations, and possessing so many improvers, or of being connected with so much interesting medical literature as well as history. When I say this, I do not mean as respects their history during later times, for since the time of Smellie no very considerable or important alteration in their form has taken place: numerous, indeed, these alterations have been, and almost numberless, for there has been scarcely a single practitioner that has attained any degree of eminence in the obstetric art, who has not thought it necessary to perpetuate his name by devising some alteration in the original forceps. Nor would I venture to deny, that some few, more especially in later times, have not only displayed much ingenuity, but also, that one or two have sufficient merit to deserve the title of actual improvements. But still the difference between their shape and that of the English forceps, when they first received the pelvic curvature in 1752, is so trifling as scarcely to warrant the title of a new invention: they are all children and grandchildren of the Smellie forceps; and with very few, if any exceptions, they have all essentially possessed the same points of character in common with them. If we examine the different English forceps that have gained most éclat, either from the name of their inventor, or on account of their own merits, we shall find that the degrees of difference between them and their original, and between each other, are far from being considerable: some may have the head curvature, others the pelvic curvature of the blades, more or less considerable; the fenestræ wider or narrower; the distance between the lower end of the fenestræ and the lock may have varied, the blades at this part may have been crooked or straight, or the length of the blades themselves may have been different in different forceps; but still, on the whole, they have been essentially the same with those of Smellie—they have been almost all what are called the short forceps; the blades have all had fenestræ, and

most of them the pelvic curvature, for which we are indebted to that celebrated accoucheur; the handles, also, in every case, have had almost the exact shape of the originals; and, as far as I know, not a single pair of forceps has been devised since his time, that has had the handles at all different to those in general use at the present moment.

It may not altogether be uninteresting to give a slight sketch of those that are most peculiar, and that differ most materially from their original: of these I have selected four, as being most worthy of notice, viz. those of Johnson, Leake, Orme, and Aitken.

The chief peculiarity of Johnson's forceps was, that besides possessing the head and pelvic curvatures, he added another, which was intended to preserve the perineum against undue distention, and thereby, injury; in other respects they were exactly the same as those of his teacher, Smellie, except that the lock was somewhat deeper. The work in which he described these forceps, entitled, "*A New System of Midwifery*," &c. and published 1769, is well known, and contains much useful and valuable matter: he also gives an excellent engraving of these forceps. That he was a man of acute observation, and possessed of considerable dexterity, as well as accuracy in the art of touching, is evident from the remark at page 271, where he describes the oblique position of the child's head in the pelvis, as it usually presents at the time of labour, most minutely and correctly, a circumstance which does him great credit, as he is the first author that notices it: the observation, however, is very short, and does not seem to have attracted much attention.

The next forceps that I come to are those of Dr. Leake, physician-accoucheur to the Westminster Lying-in Hospital; and who published, in 1774, a "*Lecture introductory to the Theory and Practice of Midwifery*."

In this work we find a description and delineation of a new pair of forceps, invented by him; its peculiarity consists in having three blades instead of two; or in other words, the instrument is a combination of the forceps with a vectis. The forceps, except being rather longer, in no wise differ from Smellie's; the lever fits upon the lock of the forceps, and is at this point fastened to them by means of a pin. The intention

of this was to raise the occiput when firmly wedged against the symphysis pubis; but experience has fully shewn that this addition makes it a clumsy and dangerous instrument, and by no means to be compared to the forceps alone: hence it never came much into notice, and still less into use.

The forceps of Orme present two peculiarities which characterize them, and by which, at the first glance, they may be distinguished from all others—I mean as to their size and the form of their blades: firstly, they are the smallest, as well as the shortest forceps that have ever been used in England—measuring only ten inches and three quarters from the points of the blades to the lower extremities of their handles; and, secondly, the blades (which are straight) are considerably narrower at the point than at the base. Besides these two distinguishing marks, it must be observed that the greatest distance between the blades, which is two inches and three quarters, instead of being very near the points of the blades, as is the case in most forceps, is three inches and a quarter from them; and when one considers that the whole length of the blades is only five inches and five-sixths, it will be easy to conceive how near this point must be to the lock. The distance of the points of the blades from each other is greater than what is usual, being exactly one inch; and I know of no other English forceps, except those that were first described by Aitken, of Edinburgh, in 1784, that at all resemble them in this respect. It will also be seen from the diagram, that the angle at which the blades diverge on quitting the handles, is much greater than common, being equal to eighty-five degrees, while those of Smellie diverge at an angle of only fifty-four degrees*.

Far more peculiar are the forceps of Dr. Aitken, of Edinburgh, well known as the author of a work entitled, "*Principles of Midwifery*," &c. These differ from every other English forceps inasmuch as that they do not cross at

the lock, but are united by means of a button, or knob, on the inside of one handle, fitting firmly into a deep groove in the inside of the other handle. Three or four little teeth on the inside of each handle, fitting into each other, like the teeth of a cogged wheel, were afterwards substituted. Dr. Aitken subsequently altered the blades, making them flexible at pleasure, on the same principle as his well known "living lever."

The next question is, what part of the forceps, as described by Smellie, are to be considered as entirely due to his invention? I am aware that it has been a point of considerable difficulty and dispute to determine who was the original inventor of the pelvic curvature of the blades, and that some English, as well as most of the French authors on midwifery, have given the entire merit of the invention to the celebrated M. Levret. Johnson, who always mentions Dr. Smellie in terms of high respect, gives the following account:—"he (Smellie) had also contrived a curved pair, which was shewn to me by his successor, Dr. Harvie, on the 4th of July, 1766. The Dr. took the hint of this curvature, as I imagined, from Mr. Livret, for when I attended his lectures in 1750, there was nothing shown of this kind." That this statement is perfectly correct, I have no doubt whatever; but it by no means invalidates Smellie's claim to the invention of this curvature; in fact, Dr. Johnson must have been unacquainted with what Smellie himself says upon this very point: for instance, in his first volume, when speaking of "the fillet and forceps," he says, "to remedy this inconvenience, I contrived a longer pair, curved on one side, and convex on the other;" and in the preface to his second volume, he expressly gives his reasons for not having recommended them. "In my first," says he, "among the improvements and alterations that have been made in the forceps, I mentioned a long pair, curved to one side, which I contrived several years ago, for taking a firmer hold of the head in the pelvis when high; but I did not then recommend the use of them, because I was afraid of encouraging young practitioners to exert too great force, and give their assistance too soon."

When we consider the remarkable modesty and known veracity of Dr. Smellie's character, it would surely be

* Many of the continental forceps form an angle much more acute at the point where the blades diverge: for instance, the blades of the straight forceps of Levret, described in his "*Observations sur les Causes et les Accidens*," &c. Paris, 1747, and which were nearly the same as those of his teacher, Gregoire, diverged at an angle of only ten degrees, and in those with the pelvic curvature, a description of which he published in 1751, in his "*Suite des Observations*," &c. the blades diverge but a trifling degree more.

unjust to throw any doubt upon the merits of his claim: "that he was candid and modest (says his biographer) appears through every page of his works, ready on all occasions to acknowledge the merits of others, and when correcting their errors, assuming no superiority over them*.

Although I have thus ventured to defend him against Dr. Johnson's charge of having borrowed the idea from Levret, still I think it must be owned in justice to that celebrated accoucheur, that although Dr. Smellie may deservedly have full right to the merit of it as his own invention, still the claim to priority must be given to Levret. It was not only published before Smellie's work, viz. in 1751; and even although Smellie himself expressly declares "that he had contrived it several years ago," there is, nevertheless, every reason to suppose that Levret (although unknown to him) was in possession of similarly curved forceps so early as 1747. As, however, Levret merely mentioned the fact of having invented a new curve to the forceps, without giving any description of it, his conduct was severely animadverted upon in a "Lettre adressée au Médecin qui travaille au Journal des Sçavans au sujet du Livre de M. Livret, intitulé, Observations sur les Causes et les Accidens, &c. 1749."

These criticisms produced the work from Levret, in 1751, viz. "Suite des Observations sur les Causes," &c. where he gives a description of the new forceps, and full directions for the application of them. It is, however, a question of little moment which of these celebrated accoucheurs has the claim to priority; there can be little doubt but that both have the merit of the invention, and it is undoubtedly Smellie alone to whom the English are indebted for it: hence it seems to me rather remarkable that not only Mulder, in his admirable "Historia Literaria et critica forcipum et vectum obstetricorum," should give the entire merit of it to Levret, but that even J. W. Schlegel, in his valuable translation of it, should have passed over this interesting point without notice†. I can only attribute

this omission to their having overlooked what Smellie says on this subject in his preface to the second volume.

I now proceed to consider the *lock* of the forceps, as presented to us by Smellie, since whose time, as must be well known to every accoucheur, the lock has formed one of the main characteristic points of difference between the French and English forceps, the blades of the former being united by the common pivot, the latter merely fitting into each other by means of a deep groove or depression.

It is a curious fact, but I do not recollect among the various foreign forceps that I have had the opportunity of examining, ever to have seen a pair of forceps with the English lock that had not also the handles of wood, as is commonly the case in this country. The forceps of the late Elias von Siebold, professor of midwifery at the University of Berlin, may perhaps be taken as an exception; nevertheless, although the blades do not unite in the English manner, but are fastened by means of a pivot, still the lock differs widely and materially from that of the French forceps; it is of peculiar construction, and cannot be classed with either species of forceps: with this exception, I know of none with the English lock that have not also the handles of wood. But to return to my subject, from which I have unintentionally digressed, the question is, whether the English lock is to be attributed to Smellie, or whether it is of earlier date. This was, in fact, the original object that induced me to turn my attention more directly to the history of the English forceps, as it had always struck me as being a point still undetermined to whom we should attribute the merits of its invention.

Giffard, whose posthumous work was published in 1734, was in the habit of using an extractor, of which an engraving is given; that he used this instrument at a very early period is proved by his having applied it in April 1726*.

Johnson, who also notices this fact, says, "I have a pair of forceps which did belong to a Mr. Drinkwater, (late surgeon and man-midwife at Brentford) who began practice in 1668, and died in 1728: the form and size of this pair

* Biographia Medica, by B. Hutchinson. vol. ii. page 393. London, 1799.

† Auf diesen angeführten Tafeln (Smellie's plates) findet man zwey Zangen, abgebildet, wovon die eine, die er anfänglich von Holz, dann aber von Stahl, machen liess, kurzer als die andere ist.

Beyde waren erst gerade, der längern aber gab er nachhero die neue krummung des Levret.

Ge-schichte der Zangen und Hebel, &c. § 21.

* Cases in Midwifery, by the late William Giffard. London, 1734. Case 14.

agree with those of Chapman and Giffard, save only that the books of the handles are turned outwards*."

Chapman mentions that Giffard was in the habit of connecting the two blades by a small screw, but I know not upon what authority he says that, because in the engraving of Giffard's extractor, there is no trace of any thing of the kind; nevertheless, Chapman seems to infer that all forceps or extractors had been hitherto connected by means of a screw, and, in speaking of the advantages which he had found in not using this method of connexion between the two blades, he says, "Thus have I delivered several women since my coming to town. Mr. Giffard, in Case 14. and elsewhere, frequently complains that his extractor slipped, which I am fully persuaded it would not have done *if the parts had been left unjoined*, as I now use them." In speaking of what first induced him to make this alteration, I cannot do better than quote his own words. "I do ingenuously confess (says he) that I came by this hint and improvement by mere accident, as I believe is frequently the case in discoveries of the greatest importance: for many years my forceps happened to be made of so soft a metal as to bend or give way, or suffer some alterations in their curve—they were made, *as usual, with the screw* fixed to one part or side of them. At length I caused another pair to be made for me, of better metal, and some other improvements; the screw part being contrived to take out, and not fixed, as in the former. This screw I happened to lose in the clothes at the delivery of a woman; and being sent for to another presently after, and being, indeed, forced to make the trial, found that the instrument did its office much better without the screw, or the two parts being fixed †."

Thus we see the first step made towards the invention of the English lock; and upon examining the delineation that Chapman has given of his forceps, in the second edition of his work ‡, we

find that the shank of each blade was merely provided with a deep depression at the point where the screw used to form the connexion between them, so that the two blades fitted into each other, and, being made thicker at this part, required only the pressure of the operator's hand to keep them in their place. Whether any further improvement was made by Chapman himself or not, I cannot pretend to say; to him is undoubtedly due the merit of being the first who hinted at this new method of locking. Accordingly, in 1736 (only one year after the publication of the second edition of his work, wherein he describes this instrument), we find that his forceps had received the further improvement of not only fitting into a depression in each other, but of sinking into a deep groove, by which they gained nearly all the firmness of a pivot joint, and yet could be united or separated with the greatest facility; whereas those that he described in his work remained united only so long as they were pressed against each other by the grasp of the operator's hand, and when this was removed would naturally fall asunder. For this information we are indebted to Mulder for the communication of an interesting letter from his former teacher, Du Pui*, who had sent him these forceps for inspection. I have copied the sketch of them from Mulder, because it is evident, from the exact resemblance between them and those described by Chapman (excepting the lock), that they must have been made shortly after the publication of his work; and this agrees strikingly with the account Du Pui gives of them. "During my stay (says he) at London, in 1778, I bought these forceps at an auction of the instruments of M. Falconer. Not finding the name of their inventor in the catalogue, I searched for it among the various authors, but I could nowhere find a description of them. This improvement in the lock of Chapman's forceps was known to all, and was considered to have been made in the year 1736, or somewhat later; but no one could furnish me with the inventor's name, or history of the instrument," &c. The delineation that Mulder gives of these forceps is very interesting, and shews the transition from the improved lock, as described

* A New System of Midwifery, in 4 Parts, &c. by R. W. Johnson, 1769, page 170.

† Chapman's Midwifery, second edition, page 20-21. 1735.

‡ In the third volume of Medical Essays, some observations were made on Chapman, as being in possession of forceps, but not choosing to communicate them to the public: to avoid which imputation, he gave a pretty full description of the instrument in his second edition, 1735, accompanied with an engraving.

* Mulder, Geschichte der Zangen, &c. § 11.

by Chapman, to the still further improvement in the annexed outline.

From these data, and knowing that Chapman had paid considerable attention to this subject, and that he had lived some time after the publication of his second edition, I confess there seems to me no little degree of probability that this further improvement in the lock of the forceps was also due to his ingenuity.

When we consider how extremely backward the state of the forceps was even till the time of Smellie, and in the hands of how very few these instruments were at that time—when we look at the clumsy machine that was invented and published by Dr. Burton only a year before the appearance of Smellie's "Treatise on the Theory and Practice of Midwifery," in 1752, the probability of Chapman himself being the inventor is greatly increased; at least, as I said before, if he did not invent these identical forceps, he has the merit of having made the first step towards it, and given the first hints towards their invention. At any rate, Smellie cannot be considered to have had any claim whatever to it, as it is decidedly of a much earlier date.

Having considered the blades and lock of the English forceps, it remains for me now to examine into the history of their handles.

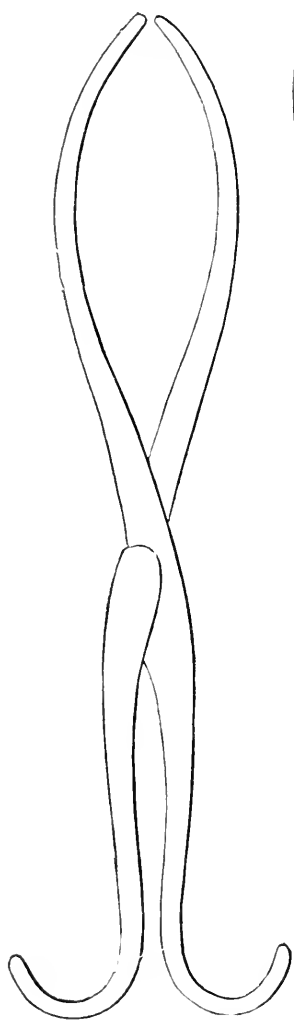
As far as I am acquainted with the subject, the Smellie forceps are the first that ever appeared in England with this species of handle, and from this circumstance alone, at the first view, one would naturally conclude that Smellie therefore invented them. It is, however, a fact, that in mentioning the different alterations that he had made to the forceps, he never once speaks either of the lock or the handles as having been improved or invented by himself—a point on which one has no reason to suppose he would have been silent, if the contrary had been the case.

As we find from the introduction to his first volume that Smellie was well acquainted with the work of M. Mes-

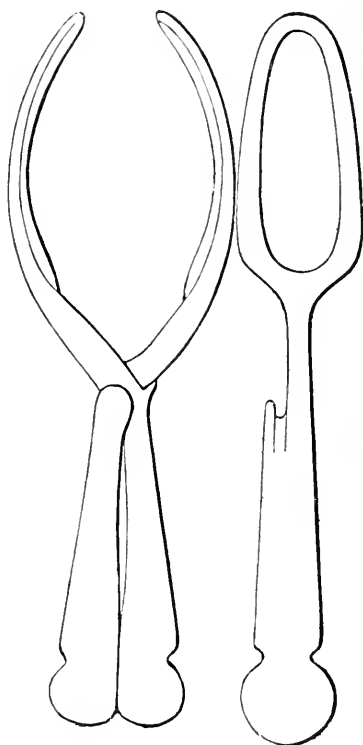
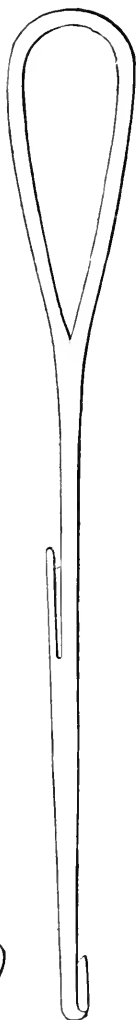
nard, of Rouen, that had been published at Paris nine years before the appearance of his own, and since M. Mesnard describes a forceps, which he had been in the habit of using, that had wooden handles very similar to the English ones, it is not impossible, as Smellie speaks favourably of the work, that he took the idea from Mesnard's instrument.

If he had been acquainted with the forceps of John Palfyn, of Ghent, in Flanders, I should have been much more inclined to suppose that he had borrowed the idea from him, because the form of the handles of Palfyn's *tire tête* not only resembled those of Smellie's forceps much more than those of Mesnard, but were also made with a depression at their extremity, like the present forceps, in order to tie them together by means of a fillet or bandage. Palfyn, however, never published a description of his forceps; he merely exhibited them to the French academy, as the following observation of Levret shows*:—"Il y a environ 24 ans que M. Palfyn, chirurgien à Gand, et démonstrateur en anatomie en la même ville, vint à Paris pour y faire imprimer son Anatomie. Il presenta en ce tems à l'Academie des Sciences un instrument pour tirer par la tête les enfans enclavés au passage: il en recut les louanges comme en étant l'inventeur." It must, I fear, still remain a matter of doubt whether the English handles were invented by Smellie, or whether, as I am more inclined to suppose, were in some degree copied from those of Mesnard: he has, at least, the merit of having first introduced them into this country, and after all, in speaking of his merits, the question is not whether he did or did not invent this or that part of these valuable instruments. Be it as it may, Dr. Smellie has deservedly the merit of being the improver of the English forceps, and the founder of English midwifery.

* Levret, Observations, &c. Paris, 1747.



Chapman's Improved Forceps, 1736.



Orme's Forceps, 1785.

ON THE HYDRENCEPHALOID AFFECTION OF INFANTS, ARISING FROM EXHAUSTION.

BY

MARSHALL HALL, M.D. F.R.S.E. &c.

To the Editor of the London Medical Gazette.

SIR,

THE profession persist in giving that which is *my* property to another, who

so far from claiming it for himself, gives it in the most unequivocal manner to *me*. Under these circumstances it would be absolute supineness in me not to claim it. I allude, sir, to the merit of being the *first* to draw the attention of physicians to the hydrencephaloid affection of infants, which arises from exhaustion, and of which every day, now that the case is discriminated from hydrencephalus itself, furnishes fresh examples.

I may well say "the profession," when I observe the mistake alluded to made by such members of it as Dr. Elliotson in this metropolis, and Dr. Graves in Dublin.

The former gentleman, after giving me due credit for my inquiries into the effects of loss of blood, observes— "Children are liable to all the signs of acute inflammation of the membranes of the brain—that is to say, of acute hydrocephalus; and yet you would be wrong if you treated the disease as hydrocephalus. You know that in hydrocephalus there is acute pain in the head, intolerance of light, squinting, vomiting; afterwards dilatation of the pupils, convulsions, complete insensibility. Now these signs will take place more or less though a child have no inflammation of the brain, and may all be frequently remedied, not by bleeding, but by giving ammonia and nourishment. You will find the subject spoken of by Dr. Gooch, in a collection of papers which he published on different subjects, but particularly those connected with the Diseases of Women*."

In an account of an introductory lecture recently given by the latter able and zealous physician, it is said that he "took a review of the contributions to medical science in England, alluding particularly to some of the late Dr. Gooch's practical remarks on the management of infants*."

Now I am not aware that Dr. Gooch has recently published any remarks on any other morbid affection of infants than those which occur in his late admirable work on Diseases peculiar to Women. On the disease in question, in that work Dr. Gooch uses the following words:—"I shall not enumerate this paper with a multiplicity of cases, but state that the above are only specimens of a class of which I have seen enough to convince me that they deserve the attention of the profession. If I had any doubt about this, this doubt would be removed by the fact that Dr. Marshall Hall has already recognized them, and described them in a paper which has been read at the Medico-Chirurgical Society. *He has, therefore, anticipated me in noticing them,*" &c.

The fate of this contribution to medical science has been rather singular.

When my paper was before the Medico-Chirurgical Society, there was some demur about its publication, and some proceedings to which I did not choose to submit. Now that Dr. Gooch has confirmed my observations, and that fresh evidence of their correctness is added daily, the merit of originality has been, not claimed by, but given to, another! As to the conduct of the Society, Dr. Gooch has, in a note which I received from him shortly before his decease, characterized it as "foolish." But when the council of such societies is, in fact, one person, its decisions may well be partial, and its members driven away in disgust.

But to return to the proper subject of this communication. The first detection of the affection in question, has, by some, been ascribed to Dr. Abercrombie. That gentleman has, indeed, given a cursory description of it, in his admirable *Researches on Diseases of the Brain and Spinal Cord*, published in 1828. Happily my first publication on the subject was in the year 1825, in a little volume entitled "*Medical Essays*;" so that the question of originality, or rather of priority, is thus cleared up beyond all dispute.

Leaving this question, then, I proceed to observe that the state of exhaustion in infants sometimes shews itself under different forms from that of the hydrancephaloid disease. I have seen a variety of convulsions, and of croup-like affections, attributable to this condition; and, as I doubt not that this subject will speedily be brought before the profession more distinctly, I would, to prevent mistakes, just observe that it was hinted at in my original Essay.

One singular affection arising from exhaustion in infants, is a state of retraction of the neck. With this there is uniformly huskiness of the voice.

When the question comes to be, whether we shall apply leeches and mercury, or give brandy and ammonia, it is surely one of great interest: an error either way is fatal! Was this an unimportant question for a medical society? Daily events prove its importance.

It is interesting to add that I have observed similar affections in the young of animals. If they die of feebleness, or exhaustion, they become affected with laryngeal and convulsive symptoms.

Of the effects of exhaustion in the young of animals, I have just had an

* Med. Gaz. No. 153, p. 127.

† Ibid. No. 160, p. 401.

interesting example in the *canine* species.

A brood of seven puppies, being left by their mother when five weeks old, one of them, feebler than the rest, seemed to pine, and became affected with a sort of hacking cough. It continued to pine, and on the fourth day became attacked with convulsions. It was gasping when brought to me; at length it seemed to be dead. I continued to listen to the beat of the heart, which was quite distinct long after the gasping had ceased, when I perceived a return of the respiration. By rubbing and warmth the little animal revived, and continued to live.

I was witness to another similar attack of fit in the evening. It seemed to affect the system of respiratory muscles, and not those of ordinary voluntary motion. Had the animal died, it would have died of *asphyxia*. A similar variety of fit, I am persuaded, occurs in the infant, and proves suddenly fatal. Might not this event be avoided in some cases by artificial respiration? I should add, that the cornea of the left eye had become first opaque, and covered with mucus, and thus extensively ulcerated. Inflammation of the eye and ulceration of the cornea seems to be a frequent effect of exhaustion. A degree of inflammation of the eye occurs in some of the cases of the hydreencephaloid disease of infants.

The little creature survived, but seemed feeble. It died during the night.

On examination, slight effusion was found in the ventricles of the brain, and the lungs were much congested, especially the right lung.

I purpose shortly to send you several cases of the hydreencephaloid disease, with which I have been favoured by various medical friends, together with some additional observations. My present object is merely to correct a prevailing mistake and injustice.

Yours very truly,

MARSHALL HALL.

14, Manchester-Square,
Dec. 30, 1836.

BIOGRAPHICAL SKETCH
OF THE
LATE DR. JAMES MAGENIS.

DIED at his house, Great Chesterford, Essex, on the 30th of October last, aged

71, James Magenis, M.D. the senior physician in his Majesty's Navy. Dr. M. was a native of the north of Ireland, (county Down) and from his earliest youth dearly attached to his country, both naturally and politically. He was of a very ancient and distinguished family in that country*.

Dr. Magenis entered into the naval service of the country as a medical officer in early life, and after serving in the East and West Indies, with Sir George, afterwards Lord Rodney, in the glorious battle of the 12th of April, he was promoted to the rank of full surgeon in 1782: what particular ships he served in is not known to the writer farther than that his last was the Quebec frigate, in which, however, he did not go to sea. After this the Dr. settled in private practice in London, but on account of the revolutionary war, he was in a very few years called upon to serve as surgeon and medical superintendent of prisoners of war at one of those depôts when the naval administration was under that distinguished statesman, the present Earl Spencer.

The poor prisoners had great reason to be grateful on account of Dr. Magenis's appointment, for, notwithstanding the most liberal allowance of provisions and necessaries of every kind ordered to be supplied to those unfortunate captives, by the liberality of the British government, the commissariat department, but for the zeal and integrity of the subject of this brief memoir, would have supplied inferior articles. As an example — after Dr. M. had found it necessary, in the due performance of his duty, to represent to the Board of Admiralty their conduct in this respect, he was invited to dine with one of the parties, when, after dinner, the Doctor was asked how he liked his Madeira: "It is exceedingly good," replied the doctor. "I shall send you a cask of the same in a few days," said his entertainer: to which Dr. M. rejoined, that he should be most happy to receive it, and added, "but bear in mind, before you do send it, that the beef and mutton for the prisoners must be such as I approve of, notwithstanding your present." Need we state that the

* Dr. Magenis was lineally descended from the Viscounts of Iveagh. The Admiralty and Navy Boards spelt his name with two n's, but improperly.

wine was never sent? for the unhesitating integrity of the worthy deceased became, by his remark, but too apparent to his host. Would that some others in those days had been such!

The Doctor's distinguished services at this dépôt were not overlooked by Lord Spencer, who, on a vacancy occurring in April 1800, promoted Dr. Magenis to be physician to the Royal Naval Hospital at Plymouth, in which capacity he continued there, at Haslar and at Deal, until 1812, when, from severe attacks of rheumatism, occasioned by the cutting easterly winds which prevail so much upon the latter coast, he was constrained to go on half-pay.

Some months after this, Dr. M. purchased a small estate at Chesterford, in Essex, the residence of the late distinguished traveller, Mr. Eustace, who died in Italy some years afterwards.

Dr. and Mrs. Magenis always paid an annual visit to London in the month of May, and in 1829 we never saw him look better; but for about two or three months before his usual visit in this year, he complained a good deal of a pain, which seemed by his description to be seated in the back and along the costæ on both sides, but particularly on the right, in the course of the origins of the diaphragm. About two or three months before his decease, the writer went to Chesterford to see him, as he had discovered a tumor or enlargement of the liver on the right side, nearly in the situation of the gall-bladder, but rather anterior to it. Dr. Haviland, the distinguished professor of medicine at Cambridge, and Mr. Fisk of Waldon, the doctor's friend, met him when the induration of the liver at that part was very distinctly felt. He was then much emaciated, and there is no doubt but that the pressure of this tumor upon the ganglia of nerves, immediately under, produced the pain he had so long and to the last complained of as so excruciating in the direction before stated. The blue pill—camphorated mercurial frictions, with the hydriodate of potass, were recommended, in which Sir Gilbert Blane, one of his oldest friends, who was consulted, fully agreed.

When the writer of this went to the funeral of his deceased friend, the church could not contain the half of the people who attended, and he believes that there were not thirty persons in the village who were not present on the occasion,

to shew their last respect to so good a man, and so generous a benefactor to the poor of the neighbourhood. A benefit society, which the Doctor had established in the village, and for which he had drawn up rules and regulations, all attended with their white wands, and brought up the rear of the solemn procession to the ancient church of Chesterford, in which he was interred in a vault expressly made for the deceased. Of this parish our present distinguished Bishop of London was the vicar, and the intimate friend of the deceased.

Dr. Magenis was a large and valuable contributor to the early volumes of the *Medical and Physical Journal*. Some of his observations have been transcribed, almost verbatim, into more standard works, particularly those on dropsy, and on the use of digitalis in phthisis pulmonalis. Besides these he contributed to various other periodicals, but we believe anonymously, for during the last years of his valuable life he was averse from his name being in print, and in this he has more than once suggested the same to the writer as *his* line of conduct. With all this diffidence, no man in the kingdom had less cause, for he was, even in his common epistolary correspondence, a most elegant and nervous writer, his language strong and well chosen, and his periods short and pithy. The Doctor's common epistolary correspondence, indeed, was so distinctly written, and so correctly pointed, even during the last three weeks of his sufferings, that it might be printed without revision.

Dr. Magenis was always remarked for his neatness in dress, for his most gentlemanly deportment in every society and situation into which a gentleman may be thrown, for his hospitality, and for his being methodical in every thing he did—his table, house, and grounds at Chesterford, are examples of the former and of the latter.

As it is known to the writer that the doctor kept a most correct meteorological table for about thirty years, it is greatly to be desired that his amiable and afflicted relict may put these valuable documents into the hands of some of his numerous scientific friends, that they may be available to science.

Dr. Magenis had no acquaintances—they were all his friends; and of the number were his patients, nurses, assistants, and colleagues: besides many

titled heroes of the the naval and military service, whose friendship he fully enjoyed and merited to the last.

Dr. Magen's acknowledged writings are contained in the third, fourth, fifth, ninth, and tenth volumes of the Medical and Physical Journal. The subjects are, "On the Medicinal Effects of Digitalis," vol. iii. "On the Cure of Dropsy, and on Epilepsy," vol. iv. Two articles again on "Digitalis in the Cure of Phthisis Pulmonalis," in vol. v. "Observations on Apoplexy," in vol. ix.; and a short article in vol. x. "On the Influenza that then prevailed." Some of these papers are very elaborate; particularly those on digitalis, on dropsy, and on apoplexy; and the reader cannot but be struck with the perspicuity and great precision observed by the author in every article he has avowedly published as his own. The truth of Dr. Magen's statements are so apparent in themselves, that even those who never knew him, in reading cannot but receive them as they are and have proved to be—examples of the most perfect integrity and honest detail of facts; and, in these last particulars, the writer never knew any man more scrupulously exact in all transactions in life, for he was his intimate friend for upwards of twenty years.

Sir Gilbert Blane informs us that at the end of the last century, while he was a commissioner for sick and wounded seamen, a Treatise on Strapping in Ulcers was transmitted to that Board, in manuscript, from Dr. Magen, then employed at a dépôt for prisoners of war, as before adverted to, in the shape of a report. This was thought so highly of by the medical commissioners that it was transmitted to the Admiralty, with a recommendation that it should be printed at the public expense and circulated throughout the fleet; with which recommendation their lordships complied, and it was printed and circulated accordingly.

In the domestic arrangements and construction of hospitals, too, the subject of this *éloge* was no less intelligent, and the new naval hospital at Deal was constructed after his plan; for, according to that of the architect, the fire-places were placed at the very end of long wards for sixteen patients, in place of being as they are, in the centre of the back walls; so that the

heat is now more equally diffused;—and according to the plan of the architect, the piers were to have been but the width of the windows, viz. three feet—now the piers are nine feet; in which space two beds stand most conveniently.

We have profited much by the knowledge of the character here briefly sketched of this distinguished physician, and trust that the numerous readers of the London Medical Gazette will do the same.

December 22, 1830.

OPERATION FOR RESTORING THE COLUMNA NASI.

By ROBERT LISTON,

Fellow of the Royal College of Surgeons, Edinburgh, &c. &c.

[In our preceding volume will be found a paper, by Mr. Liston, on the removal of certain deformities of the face. To the two cases there detailed, that gentleman, in the No. of the Edinburgh Medical and Surgical Journal for January, has added three more, together with some further observations on the subject: these we extract.]

CASE III.—Mary Anne Love, aged 11, was admitted into the Royal Infirmary about eighteen months ago, labouring under *lupus*. The alæ of the nose, the upper part of the lip, and the inner surface of the nostrils, presented one continuous surface of angry ulceration. The *columna nasi* and part of the cartilaginous septum were destroyed, and the point of the nose was flattened and depressed. The discharge from the ulcer was acrid and highly offensive, and the countenance was very much disfigured.

The disease had existed for six months previously to her admission; and during that time various applications had been employed with the view of checking the ulceration, but without effect.

In the Infirmary means were taken to improve her general health, and the sore was touched occasionally with spirit of turpentine. Under this application the ulceration seemed to be arrested for some time, and the aspect of the sore began to improve; but the benefit was temporary, and the liniment, having lost its influence over the irritable surface, was disused. A solution of the nitrate of silver was then em-

ployed, and that also, though at first beneficial, gradually became inefficacious. Solutions of the sulphates of zinc and of copper were afterwards had recourse to; and by changing the above applications, according as each became inactive, the sore was brought into a healthy state, and the process of reparation commenced. The topical remedy which all along proved of most service, and under the use of which the parts were ultimately brought to cicatrize, was the spirit of turpentine.

By the middle of last May cicatrization was almost complete, and I prevailed on the patient to have her deformity removed by the formation of a new columnna. The operation was performed in the same manner as in the preceding cases, and adhesion was completed in both the nose and lip in two or three days. The columnna was supported by compress and bandage, and the *alæ* were kept distended by dossils of lint.

Ulceration has not returned; and the margins of the *alæ*, which were not quite healed previously to the operation, are covered with thin crusts, and apparently cicatrizing. The change in her appearance is very flattering, and promises to be still more so when œdema leaves the part.

CASE IV.—In the summer of 1827 I performed the Indian operation for restoration of the nose on Charles Thorne, and gave some account of his case in the 92d No. of this Journal (Edin. Med. and Surg.) I then stated that the operation had completely succeeded, except in the columnar part, and that I intended to repair that deficiency as soon as the patient would submit to further procedure. To this, however, he was averse, and left this part of the country.

In August last he again presented himself, and was now anxious that the operation should be performed, as the point of the nose had necessarily fallen much down from want of mesial support. I made him a new columnna (the third he had had) from the upper lip, having previously elevated the point of the nose as much as possible. The parts adhered quickly and firmly, and he left the Infirmary much pleased with the support and improved appearance which the *new feature* of his countenance had obtained.

CASE V.—Mr. R. H. enjoyed good health till April 1827, when he had a

smart attack of tertian ague, which yielded to the use of sulphate of quinine. In the following August, after severe mental exertion, he complained of pain in the head and general indisposition. He was advised to abandon professional pursuits for a season, and went to Brighton, where he was seized with violent pleurisy. Early in October he had another attack of tertian ague, with severe pain in the right side of the head. Aguish symptoms continued to harass him till December, after which he remained well till April 1828, when he was again affected with ague, pain in the head, debility, &c. and these symptoms returned in January following.

In July 1829 he was sent to Leamington, and while there encrustations began to form on the nostrils, and on the separation of the crusts foetid discharge occurred. The discharge continued till the latter end of September, when he went to London. There his case was pronounced to be one of secondary syphilis, though the patient declared then, and declares still, that he never had primary symptoms; and, accordingly, he was ordered blue pill, sarsaparilla, and eventually mercurial friction. His mouth soon became affected, and the salivation was very profuse. In October the bones of the nose and palate began to exfoliate, and the patient became much reduced. Early in November severe inflammation of the eye and of the side of the face supervened; and Mr. H. was bled, purged, and starved. The inflammatory action was soon subdued, but was followed by a violent attack of diarrhœa, which brought the patient very low. From this time he regained strength gradually, and now he enjoys excellent health.

He applied to me in August last. The exfoliation has been extensive, and caused apparently by the abuse of mercury. In the posterior part of the palate there is a large deficiency, which the patient is obliged to supply by a metallic substitute; and the lower part of the osseous septum is destroyed.

The cartilaginous *septum* and *columnna nasi* were gone, and the nose lay quite flat on the face, with its wrinkled *alæ* sunk on the floor of the nostrils, and its point adhering to the upper lip, where the root of the columnna had formerly been.

The first thing to be done in this case was to prepare the parts for the colum-

nar operation; and, accordingly, I divided the attachment between the point of the nose and the lip, removed the ruinous remains of the columna, and separated some adhesions within the nostril that had formed during the cicatrization, raised the apex of the nose, and distended carefully its alæ. By these means even, the appearance of the patient was much altered, and he began to be satisfied with what had been done. He was persuaded, however, to get a more durable and elegant support for the parts than dossils of lint, and underwent the columnar operation on the 31st of August.

In this case, as in the others, union took place by the first intention; and, I need scarcely add, that the result is very satisfactory.

Such is a short outline of those cases in which I have had occasion to form a new *columna*. The deformity caused by the loss of this prominent part is very great, indeed almost equal to that occasioned by destruction of the whole nose; and an operation for the removal of such deformity, so simple, so effectual, and, I may add, so neat, cannot fail to be approved. The lateral slip, destined to form the new columna, should not be twisted round so as to present its cutaneous surface externally, but merely elevated and affixed to the point of the nose. By twisting, the chance of success is diminished, and if the part does adhere, it is thick and clumsy. The mucous membrane forming the inferior surface of the columna retains some of its characters for a few weeks, but gradually assumes a cuticular appearance. For some time after the operation, on tickling or compressing it, the sensation is referred to the inside of the mouth. Though it might be supposed that in a male adult the beard on the inner surface of the new columna would prove a source of irritation, this is not the case; the hairs lose their stiff and bristly character, not being eropt frequently as before, and being constantly moistened by the mucous secretion of the nostrils. In fact, they come to resemble those hairs that grow naturally from the parts.

In the above cases the incisions always adhered by the first intention; and I should think that if proper care be taken to place and preserve the raw surfaces in accurate contact, adhesions will always occur, little or no mark remain-

ing. Indeed, the appearance of the upper lip will always be benefited by the operation, for when the columna is lost, the lip becomes elongated and tumid at its centre; and by a narrow slip being removed from it, this defect is obviated, whilst the cicatrix, from being in the situation of the natural depression, is scarcely observable.

In the after-treatment it is necessary to keep the alæ tense by dossils of lint, in order to assist the columna, not yet sufficiently consolidated, in supporting the parts in their natural situation; and when the columna itself becomes tumid, a compress and bandage should be neatly applied over it.

When the cartilaginous septum is destroyed, as is generally the case, of course an aperture remains between the new columna and the osseous septum, but that is not perceived unless on close examination, and does not annoy the patient.

In a recent number of the *Journal Hebdomadaire*, a case is recorded, in which attempts had been made to restore a lost columna, first by M. Dupuytren, of Paris, and afterwards by M. Gensoul, of Lyons. The operation failed, and the nose became approximated to the lip. M. Dupuytren raised a *flap of integument* from the lip, and adapted it to the nose, after having *twisted it round*. Had he formed his columna from the *whole thickness of the lip*, there would have been no necessity for *twisting* it, and in all probability the operation would have proved successful.

ANALYSES & NOTICES OF BOOKS.

“ L'Auteur se tue à allonger ce que le lecteur se tue à abrégé. ”—D'ALEMBERT.

A Treatise on Auscultation, illustrated by Cases and Dissections. By ROBERT SPITTAL, House Surgeon to the Royal Infirmary of Edinburgh, &c.

WE are very much pleased with this performance, which we are glad to perceive obtained the prize in the Harveian Society of Edinburgh. It contains a very good summary of all that is known about the stethoscope and its various applications. The student will find in

it also a succinct and pretty fair account of the doctrines which have been recently broached relative to the heart's action. But the author, of course, will not expect his readers to abide by the conclusions he has drawn; for, however well he may have deserved of the medical republic, by his promptitude in publishing the most recent intelligence bearing on the subject of his book, he cannot reasonably presume upon the acquiescence of his readers in all that he thinks proper to advance. We foresee much and vehement controversial strife on the positions of Drs. Corrigan and Hope, ere any thing with certainty be concluded regarding their merits; nor can we presume to censure those who advocate even that side of the question to which we are ourselves opposed; time, as yet, is not old enough to admit any man's forming a deliberate opinion upon them.

There are here, also, sufficiently ample notions of the stethoscopic exploration of pregnancy and fractures, with references to late authorities. And throughout the volume, the pathological details will be found highly satisfactory and instructive. The cases illustrative are numerous and well selected; and the plates, fourteen in number, though not executed in the best style of the art, are yet not to be overlooked in estimating the merits of the whole production.

Observations on the Structure and Diseases of the Testis. BY SIR ASTLEY COOPER, Bart. F.R.S. Sergeant Surgeon to the King, &c. &c. PART II.

(Third Article.)

Fungoid Disease.

Our last notice brought us to the tenth chapter of Sir Astley Cooper's work on the Testicle, in which he commences his account of fungoid diseases—an appellation by which he designates that malignant disorganization which has been spoken of by various writers under the names of “pulpy, medullary, soft cancer,” and “fungus hæmatodes.” The term *fungus* is regarded by Sir Astley as most appropriate, because when it ulcerates, it forms “a large fungoid projection,” which is loaded with blood, and bleeds on the slightest laceration.

Our author considers this disease as a form of inflammation, a doctrine of which we greatly question the accuracy; indeed, if the deposition of bone to which we alluded at the close of our preceding article, and the formation of fungus hæmatodes here discussed, are to be admitted as the results of inflammation, it appears to us equivalent to holding every morbid change in the human body to be the product of that action—than which, according to our view of the case, a more incorrect pathological principle could not easily be propounded. Having thus premised our objection to this very wide and loose application of the term *inflammation*, we proceed to the description of the symptoms, and these throughout are detailed in such a manner as to convince the reader that his author is describing nothing but what he has seen. It is from the relation of practical facts derived from his vast field of observation, that the writings of Sir Astley appear to us to derive their greatest value.

The symptoms of fungous disease in its first stage are an enlargement of the body of the testis, accompanied with great hardness, resembling that of scirrhus: this spreads rapidly, so that in three or four months the whole body of the gland becomes affected. It thence extends to the epididymis. At first the swelling is globular, but when the epididymis participates in it, it becomes pyriform, and may be mistaken for hydrocele, the more easily as a small quantity of fluid is frequently effused. At first it is not painful, but after a time darting pains are experienced in the part and along the spermatic cord: it also becomes tender, if much handled. It is very irregular as to the period of its growth, sometimes increasing rapidly, at others requiring eight or ten months to acquire any considerable size. Neither is its growth steady; it may be painful for some days, and augment apace during such time; then it may become indolent for weeks together. Slight causes will induce a return of its activity; a catarrh, for instance, may have this effect. The scrotum in the early stage remains unchanged, and the constitution is but little affected; perhaps some of the secretions may be faulty, the appetite lessened, or the bowels confined, and upon further inquiry, “it will often be

found that some disappointment, suspense, or anxiety of mind, has for some time existed."

In the second stage of the disease the scrotum is covered with varicose veins, and the testis is soft, leading to the idea of watery effusion. The spermatic cord is thickened, and there are darting pains in the part and uneasiness in the back. The constitution now suffers, and the body wastes.

In the third stage the scrotum becomes adherent to the testicle, the glands in the groin enlarge, the spermatic cord becomes indurated, and its veins varicose; according to the words of our author, it is "enlarged" and "contracted," a description in which there appears to be a contradiction in terms. At one spot of the scrotum a purple blush appears, and as there is often a sense of fluctuation at this point, the surgeon is frequently led to make a puncture, the result of which is, that only a little blood escapes from a spongy structure. This wound heals, but generally ulcerates soon after, and a fungus makes its appearance, which "gleets" a quantity of serum, having a faint peculiar odour. Frequent sloughing occurs: there is hemorrhage, and if the parts be pressed, a brain-like substance may be squeezed out. At length the patient dies, exhausted by the discharge and irritation.

In other instances, ulceration does not take place, but an increased quantity of water forms in the tunica vaginalis, the spermatic cord becomes tuberculated, and may be traced to a tumor on that side of the abdomen just below the kidney, and all the symptoms of a cachectic state of system come on, under which the patient sinks. The period required to produce the fatal result varies very much. If the disease have assumed a malignant character from the first, the patient generally dies within a year, but if it be chronic in the first instance, a much longer period may be required.

On the Dissection of the Fungoid Disease.

"I have mentioned that this complaint is in its commencement excessively hard; and when it is examined by dissection, the effusion, in the first stage of the disease, is found in the substance of the testicle, but occupying only a part of it. In the case of a patient of Dr. Blackman, of Ramsbury,

hereafter described, the disease had existed only four months, when it was removed and dissected.

"I found the excessive hardness did not arise from the very solid nature of the substance effused, but from the excessive distention of the tunica albuginea, and from its not readily yielding to the pressure from within. The substance which was effused was fibrous, of a yellowish-white colour tinged with blood, partially vascular, and when macerated it became flacculent, and had the appearance of matted wool. The seminiferous tubes ceased to be observable at that part of the testis, but in other parts they remained entire.

"In the dissection of the testis in the second stage of the disorder, it is found filled with a similar soft and white fibrous matter, which occupies the testis and epididymis, and the parts of which readily yield to pressure. And there is intermixed with the soft effusion, from common inflammation proceeding with the specific disease, a yellow fibrine (or, as it is called, coagulated lymph), the usual product of inflammation. When macerated in this state, the soft fibrine of the disease is removed, leaving the tendinous septa of the testis, in which it has been enclosed, to form a kind of cellular structure, in which it has been deposited and supported.

"In the third and last stage, when the testis has been excessively enlarged, the tunica vaginalis contains a considerable quantity of water; the tunica albuginea has given way, and a portion of the disease projects through it within the scrotum; and from hence it is, the absorbent glands in the groin become affected, and the surface of the testicle is irregular and knotted. The interior of the testis contains cysts of serum, coagulated blood, a white soft fibrous matter, which, when compressed, issues a substance like cream tinged by blood, which has been compared to putrid brain. If the scrotum itself has been ulcerated, then a fungus of the same material as that which composes the diseased testis projects through it, and is found to spring from the interior of the testicle. The epididymus is enlarged, and the tunica vaginalis adheres to the testicle where serum has not been effused. The spermatic cord is excessively enlarged, indurated, and tuberculated, from the diseased secretion being irregularly deposited; but in

some fatal cases, the cord, upon dissection, does not appear to be diseased. A quantity of serum is found in the abdomen. Behind the duodenum is placed a large tumor, to which that intestine adheres on the fore-part, and the aorta and vena cava are placed behind it. It is in different subjects of a size from that of the clenched hand to the head of a child. When cut into, it contains a soft, but still a solid fibrine, with which is intermixed a fluid like cream, slightly tinged with blood. In some persons the tumor in the abdomen begins from the lower part of the loins, and extends to the diaphragm, involving the kidney; and when it is attempted to be dissected, a large quantity of a thick cream-like matter bursts from it at different parts. The aorta and cava are diseased, and fungous tubercles and effusion are produced in their coats, and fungous effusion into the interior of the aorta. The mesenteric glands in many of these cases are enlarged and similarly diseased. The omentum in some persons is thickened and puckered up. In the liver there are generally tubercles; and in a child who died of this disease, the liver was loaded with tubercles. I lent a drawing of them to Dr. Farre, who has had them engraved in his work on the Liver.

"In a collection at St. Thomas's Hospital is a preparation of the thoracic duct obliterated by this disease, and at one part forming a tubercle as large as a walnut."

With regard to the state of the blood-vessels, the veins are very much enlarged and varicose; but Sir Astley informs us, that it is a mistake to suppose that the arteries are affected in a corresponding degree, for when the surrounding parts are cut into, these vessels are found to be "not greatly, although somewhat increased."

On the *cause* of the disease no light is thrown. With regard to the *diagnosis*, its occasionally difficulty is admitted:—"I am ready to confess," says the author, "that I have more than once been mistaken." He advises that in all cases of doubt the tunica vaginalis should be punctured.

As to the *treatment*, little that is satisfactory can be said. Sir Astley's plan is to put the patient on a course of calomel and opium for a month or six weeks, so as fully to affect the mouth;

to apply leeches and evaporating lotions, enjoining the recumbent posture. If this does not succeed, he knows of nothing else that will, and recommends that the operation be performed as soon as the effects of the mercury have entirely subsided. Anterior to this, he fears the occurrence of erysipelas. More than three months from the commencement of the disease ought not to be allowed to elapse before the castration is practised; the delay which generally takes place leads to the period being passed at which the operation could be useful.

Schirrous Testis.

Our author doubts the existence of schirrus in the same form as it assumes in the breast, namely, that of an excessively hard mass, intersected by a network of strong bands. He has, however, seen a few instances of a 'very solid enlargement' of the testicle attended with great weight, and never becoming soft, nor attaining the size of the fungous disease. The following are the appearances found on examination:—

"*Dissection.*—On cutting into the diseased part, after its removal, water is found in the tunica vaginalis, so that there is hydro-sarcocele, as it was termed by the surgeons of old times. In some parts of the tunica vaginalis it adheres to the surface of the testis. In the testis, instead of the seminiferous tubes, a hard white mass is found, in lobes or tubercles, little vascular; and sometimes interspersed with small portions of cartilage or bone. The epididymis contains the same firm fibrous secretion; and the spermatic cord is enlarged, and has small white tubercles in it. The tumor which exists in the abdomen is of a white solid texture, very unlike that of the fungoid disease."

With regard to the treatment, the same general observations made in speaking of the fungoid disease apply equally here, and the only additional point we have to notice is, a recommendation "to slough the sores when they become ulcerated." Powdered alum is mentioned as very useful in cleansing the sores and removing the offensive smell. Nitric acid, in the proportion of ʒj. to lb. ij. of distilled water, is highly spoken of: the chlorates of lime and soda are also mentioned.

Operation of Castration.

The causes for which castration may become necessary or proper are, 1st, chronic inflammation which has gone into ulceration, and formed a granular swelling, with a large portion of the gland exposed. 2d. Irritable testicle, where life has become burthensome, and the patient insists on the removal of the part. In neither of these cases is the operation attended with any danger. 3d. Fungoid disease, in which great judgment is required to decide whether it ought to be undertaken. As the date of the discovery of the disease is not always that of its commencement, the surgeon must take care to inquire into its size at the period of its being first noticed. He must also inform himself as to the previous health of his patient, two of the most important points being, whether he has suffered from pain in the loins, (which he generally calls lumbago), or has had some severe indigestion, for the disease in the testis is sometimes the concomitant only, not the precursor of disease in the abdomen. The state of the spermatic cord must be carefully investigated: if it be diseased, and the morbid change can be felt extending above the ring, the operation ought not to be performed, at least Sir Astley has never known it to succeed under such circumstances. If any of the glands in the groin be diseased, it is prohibitory of the operation. Where the testicle is to be removed, the following is the mode of proceeding adopted by Sir Astley:—

“The pubes being clearly shaved, for the hair is left with inconvenience on either side—on the one, at the moment of the operation—and on the other, in the application of the adhesive plaister, which is afterwards required—a table of convenient height is prepared by covering it with two blankets and a sheet; and a T bandage is to be fastened around the patient's loins. A small incision is then made into the tunica vaginalis, upon the fore-part of the testis, to satisfy the surgeon's mind as to the disease not being hydrocele or hæmatocele; and when this point has been settled, the operation for removing the testis is begun, by first making an incision from the abdominal ring to the very lowest part of the scrotum. From attention to this circumstance, two ad-

vantages arise:—the first, that matter is prevented from accumulating in the scrotum, when the suppurative inflammation begins; the second, that the testis is much more easily removed. Secondly, the facial sheath of the spermatic cord is next opened below the abdominal ring, and the cord is to be completely exposed. Thirdly, it is to be well pinched up between the fingers, and a tenaculum, or needle and ligature, should be thrust through it, and given to an assistant, to prevent its retraction.

“This may be considered as a work of supererogation; but Mr. Cline told me he witnessed the following circumstance. A surgeon, in removing the testis, cut through the cord, close to the abdominal ring; and when he had removed the testis, he found that there was a swelling formed in the inguinal canal; and that from the external ring a hæmorrhage of arterial blood was perceived, and the spermatic cord could not be found. After much delay, and considerable and anxious doubt, the tendon of the external oblique muscle was slit up, and the spermatic cord discovered, freely bleeding, above the ring; and the accumulated blood had issued in a large arterial stream from the aperture of the ring*.

“Ever since I heard the above history, I have secured the cord in the manner I have mentioned, before I venture to divide it.

“Fourthly: the next point in the operation is to cut through the cord; and here let me strongly urge the impropriety of dissecting around the testis before this be done; for it lengthens the time of the operation, and adds infinitely to the patient's suffering. Fifthly: having divided the cord, its lower portion is to be taken hold of by the surgeon, and by it the testis is to be drawn from the scrotum, cutting its adhesions as it is drawn out. This plan is in general easily executed; and if there be adhesions to the scrotum, they are more readily divided than in any other mode. Sixthly: lift up the cord with the tenaculum or ligature, and see and secure the spermatic artery, by drawing it forwards, and putting a fine ligature upon it above. Seventhly: turn the cord upwards towards the ab-

* In our report from La Charité, in the present No. p. 478, will be found a case in point.—E. G.

domen, and see and secure the artery of the vas deferens.

"This last artery is often not tied, and it affords a most teasing and continued bleeding.

"I cannot express myself sufficiently strongly against the barbarous practice of the surgeons of former times, of tying the whole of the cord to secure its vessels:—they drew the ligature with their whole force, and the cries of the patient were horrible, and the operation sometimes dangerous. Mr. Chandler, in compliance with the custom, on the 22d of October, 1807, removed the testis of a man in St. Thomas's Hospital, tying the spermatic cord in a single ligature, the man at the time complaining dreadfully. On the 30th of October the ligature separated, and on the following day tetanus began, and on the 2d of November he died. And it is only wonderful that tetanus was not more frequent.

"Eightly: secure the external pudic artery, which is often divided in making the upper part of the incision; and if it bleed freely, an assistant must keep it between his finger during the operation. Ninthly: secure every vessel of the scrotum which continues to bleed, or which has been observed to bleed freely during the operation. Tenthly: make two sutures, at least, in the scrotum; and if the testis has been very large, or has adhered to it, a portion of the scrotum may be removed, to prevent it from forming a loose bag, to receive blood and pus.

"The patient is to be then carried to bed in an horizontal posture, without any dressings being made to the wound; and when all apprehension of bleeding has ceased, then, and not till then, should lint and adhesive plaster be applied, and the T bandage be secured. He must be kept extremely cool, being covered only by a sheet, to prevent relaxation of the scrotum; and in summer, cold water and spirits of wine should be applied. The sutures should be removed in eight days, and the wound generally heals in three weeks.

"I once removed a diseased testis in which a hernia accompanied it, first returning the hernia, and then I dissected the cord from behind the sac. This patient, who had a chronic complaint in the testis, did well. I also removed, in Guy's Hospital, a diseased

testis, accompanied by adhering omental hernia, securing the arteries of the cord separately in small ligatures; and the patient had no bad symptoms."

Hydrocele, &c.

In the chapter on Hydrocele, which follows, we do not find any thing to detain us: we may just mention, *en passant*, that probably the largest collection of this kind on record occurred in the person of Gibbon the historian, from whom Mr. Cline drew off six quarts of fluid!

The subject next treated of is Inflammation of the Tunica Vaginalis, after which follows a chapter on the formation of Cartilaginous Bodies. These, as they appear in this situation, resemble the loose and pendulous productions sometimes found in joints: externally they look like cartilage, but internally they contain bone. They appear to grow from a stalk, which becoming attenuated, is broken by some movement of the parts, and then the new formation drops; in other instances they are seen on the surface of the testis, in a cyst between the tunica vaginalis and albuginea. In long continued cases of hydrocele, the tunica vaginalis itself sometimes becomes ossified, and a similar change may extend to the albuginea. Fungoid disease is another morbid condition of the coats of the testicle mentioned by Sir Astley, an instance of which that occurred to Mr. Brodie and himself he details.

Hæmatocele may be mistaken for hydrocele. It is best distinguished by its greater weight, its want of transparency, its obscure fluctuation, and its being for the most part the result of a blow. The blood is found in three states:—1st, entirely coagulated; 2d, some fluid blood mixed with the coagula, under which circumstances the swelling is extremely tense, and the hemorrhage frequently continues if the tunica vaginalis be tapped; 3d, when there is inflammation, a serous fluid is poured out in addition to the blood. In hæmatocele it is necessary to cut into the tunica vaginalis, and examine the state of the testicle very carefully, as this has occasionally been supposed to be diseased where it was sound, and removed when there was no necessity for so doing.

Varicocele, which is next spoken of, scarcely constitutes a disease, unless in extreme cases; and even these seldom

admit of more than palliative treatment. Sir Astley disapproves, in the highest degree, of tying the vein; but says that removing a portion of the scrotum may be practised with safety, and with the prospect of advantage.

Chimney-Sweeper's Cancer.

A chapter on chimney-sweeper's cancer concludes this highly important volume. Of the disease in question we gave some excellent examples in our No. for Dec. 25, 1830, to which we refer the reader, as containing a very fair account of the disease, agreeing, in all essential particulars, with the one before us. Sir Astley mentions having seen two cases of this affection in the cheek. He regards it as of local rather than constitutional origin, and thinks that "medicine has no power over the disease;" while local applications, with a view to heal the part, "are of no avail." There remain two means of cure—making it slough, and extirpation. Arsenic, in the proportion of a drachm to an ounce of ceratum cetacei, thickly spread on lint, and allowed to remain for twelve hours, is recommended for the former purpose; the latter is accomplished by a piece of mere dissection, which, however, requires to be carefully performed, in order to avoid wounding the testis. Every small vessel which bleeds should be secured, and no dressing applied, nor the patient allowed to get into bed till the hæmorrhage has entirely ceased. The edges of the wound are then to be brought together by sutures.

MEDICAL GAZETTE.

Saturday, January 8, 1831.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

ENGLISH AND FRENCH MEDICAL STUDENTS.

JOURNALISTS are privileged boasters—remarkable for the complacency with which they contemplate their own sayings and doings, as well as for the large share in the events of the world

which they are enabled to trace to the influence of their own lucubrations. A week or two ago, the "leading journal" favoured us with its opinions as to the nature and extent of punishment with which the ex-ministers of France ought to be visited; premising its observations, however, with the satisfactory, and, indeed, very necessary assurance, that, as the paper could not reach Paris till the fate of the prisoners had been decided, the sentiments which had just emanated from Printing-House Square were not likely to exercise an undue influence over the minds of the French Chamber of Peers. This caution cannot be too highly commended; and thus we, being fully aware of the importance attached by our Gallic neighbours to every thing which appears in the pages of the London Medical Gazette, have observed the same prudence in delaying to express our opinion of certain proceedings which have lately taken place among the medical students in Paris. Now, however, we feel less occasion for reserve, being assured, that before this can reach the bureau of the Minister of Public Instruction, it will have been definitively and irrevocably decided whether the offending parties shall be treated as men and proceeded against according to law, or looked upon as boys, and sent home to their parents with a recommendation to have them flogged.

That some such visitation ought to follow the late proceedings among the students in Paris, will be admitted, when it is considered that, forgetting the purpose for which their friends have sent them to the capital, and in too many instances neglectful of the great opportunities afforded them, they have taken it into their heads that on them hangs the destinies of France, and that because they fought like spirited boys in July, they are now fit to take a leading part in the troubles

which distract their country. Had these young gentlemen limited themselves to demanding the removal of grievances within their own department—such as a restitution of the private schools—we should not have blamed them; though we might have smiled at the grandiloquent tone in which some of their requests have been made: but when we find that, instead of this, they have been issuing manifestoes and proclamations of a political nature, we think it high time that the exuberance of their boyish “patriotism” should be checked, and their love of “glory” (for these are the watch-words) should be moderated by a little wholesome castigation. They are not content, neither, with making speeches at their societies, nor with the ready expression which a journal called the *Lancette*—worthy of its name—gives to their *professional* wrongs; but they have actually combined to purchase a certain number of shares in one of the daily papers, and thus, by their influence as proprietors, to ensure making themselves heard through a political mouth-piece. By an address lately published by one of these youths, in the paper above alluded to, it appears that they are by no means disposed to remain in the passive enjoyment of their own advantages, but desire to take an active part in guiding the “inexperience” of others. “But it is not sufficient (says the youthful orator) to preserve our own dignity; we must force others to follow our noble example.” “The people who shed their blood with ours are in want of our counsels—shall we abandon them to their inexperience?” And again: “School-fellows—the noble spectacle of a body beaming light into every spot to which it penetrates.”

The chief disturbances have occurred among the lads of the Polytechnic School, but the students of medicine are far from being blameless,

and the precious production from which we have made these few extracts is the production of one of them; nor can any thing more strikingly illustrate the excited and unsettled state of the young men in Paris than that they should listen to such inflated trash, wholly unconnected as it is with the proper object of their pursuits. We will venture to say that such a piece of galamathias never issued from the pen of an English student since medicine became a study. We know of nothing which places the character of our pupils, as compared with those in France, in a more favourable light, than when we contemplate the regular, methodical, business-like manner, in which the former pursue their studies, and contrast it with the unsteadiness and frivolity of the latter. Even in anatomy, where the French are supposed to excel, the difference is remarkable; nor can any one have visited a dissecting-room in London and Paris without being struck by the much greater appearance of persevering and industrious pursuit of his object displayed by the English student. We have heard much, of late years, of the superiority of the French; it has been the fashion to cry them up as patterns for our imitation in every thing—whether dress, medicine, or politics. In short, in the eyes of some, the mere circumstance of being foreign, stamps every thing with excellence; and with such we are not disposed to argue, for argument implies at least a show of reasoning;—but to those who weigh character and acquirements in the balance of intelligence and utility, we have no hesitation in stating it to be our deliberate opinion, that, in that kind of knowledge which is calculated to render medicine something—not merely to be speculated about in the closet, but to be converted to useful practical purposes in the chambers of the sick, the English are immeasurably before their Continental neighbours.

We readily admit the great services rendered to practical medicine and surgery by the French, and the truly brilliant career of some of their pathologists of the present age; but we speak of the relative extent to which knowledge is diffused in the two countries, and our opinion is drawn from a comparison of the principal works connected with medicine which have issued from the French and English press during the last ten years. And—to return to students of the two countries—we hesitate not to attribute this superiority among our countrymen to the difference which is displayed in the pursuits and habits of their early life. Nor assuredly is this greater steadiness of character among our young men to be attributed to the want of incentives to mischief; petty evils connected with their means of instruction, have been blazoned forth by designing knaves as intolerable grievances and unpardonable abuses; every invective that a familiar acquaintance with the most approved forms of vituperation could afford, has been liberally bestowed on their teachers, yet has the sterling shrewdness of the English students enabled them in almost every instance to see through the trick, and to regard the whole as mere hypocritical declamation—as sound and fury, signifying nothing, unless, indeed, it be the necessity of the writer to attract attention, that he might gain his bread.

We began by saying that Editors were addicted to boasting; now it is our boast, and no mean one neither, that since the establishment of this Journal, the system of humbug has been demolished, and that we have gained the good opinion of the pupils—(of which we have received many substantial proofs)—not by flattery—not by cajoling them into a belief that they were superior to their teachers, and that their knowledge, and judgment, and importance, were in direct propor-

tion to their youth and inexperience, but by pointing out to them the modes by which they might in time become—what the most intelligent of their predecessors have been before them. We say to them now, then—Avoid the baneful example of the French; they attempt to reconcile things which are incompatible—the cultivation of science and the turbulent excitement of politics. “Glory” is their idol, and they seek it where the word becomes a mere burlesque. “Honour hath no skill in surgery,” saith Falstaff, and he might have added, that “glory” has as little to do with it. Yet such is the passion of the French for *effect*, that they apply the inflated language of the camp to the pursuits of ordinary life; and when we read of “honour” and “glory” in operating for a strangulated hernia, or administering a dose of jalap—or see any other of the useful but homely details of our art dressed up in military phrase, it reminds us of the Parisian haberdasher measuring out his tape and ribbons in ferocious mustachios and military boots—which was no uncommon sight, till some humorous caricatures drove them back by force of ridicule to attire more suited to their calling.

The attempt to excite a *French* feeling here has been made and failed. It was proposed some months ago, by an *élève* of the Paris school, to convene a meeting of all the students in London for medico-political purposes,—for an interchange of sentiments and sympathies with their brethren in France. The idea was warmly seconded by a sagacious contemporary, and it was recommended that the meeting should be held “in the largest class room in the London University,” as the only one, forsooth, capable of containing the multitude expected to assemble. We turned the idea into ridicule at the time, and confidently asserted that the meeting would never take

place; and so it proved. We knew the character of the English students too well to suppose them such blockheads. They are alike our protégés and our patrons, and where any thing connected with their real interests is to be discussed, this Journal will never be backward in asserting their rights and advocating their cause. Meantime, let them remember, that as members of the medical profession we ought to forego the dazzling for the useful; skill and knowledge—not glory—ought to be the objects of our ambition. Our business is connected with the quiet domestic scenes of life—our science is one of peace;—and as an apt quotation is exceedingly servicable to support an argument, and round a sentence, we shall conclude by recommending to them the example of Iapis, who preferred a knowledge of the healing art to the more dazzling gifts of Apollo:—

“Scire potestates herbarum usumque medendi
Maluit, et mutas agitare inglorius artes.”

Since the above was written, we have learnt that at the recommendation of the Minister of Public Instruction, the law officers of the Crown have instituted proceedings against all students who have attached their names to “protests, petitions, projects of associations,” &c.

QUACKERY—A LONG ADVERTISE- MENT.

THE Morning Chronicle of Wednesday contains an “advertisement” full five columns and a half in length (longer, by the way, by two columns, than the American President’s lengthy message in the paper of the day before)—a letter, forsooth, to Sir Astley Cooper, but, in reality, the last legacy of a departed quack to his disconsolate patients. As if these dupes had not been sufficiently shown up on the occasion of the late inquests and trial at the Old Bailey, their names, addresses, and invaluable evidence, are here once more “held up to fame.” It will, no doubt, be a pleasant, though a melancholy thing, for them to read in this authenticated document the parting

words of wisdom and affection bestowed on them by their beloved practitioner; and for the public it may not be inconvenient to know where they may refer, at any time, to as gross a picture of delusion on the one hand, and of ignorance and presumption on the other, as was ever offered to the eye of the world.

Sir Astley has inserted an advertisement in the newspapers, stating that he knew nothing of the letter, the case, or the author.

MR. MACKELCAN.

To the Editor of the London Medical Gazette.

SIR,

IN your number of the 25th December, you have made some severe remarks upon me, for circulating a note among the families in my neighbourhood, stating my mode of attendance.

In reply to your remarks, I shall state the circumstances which led me to do so. After I had been two years in my present residence, a medical man took the house adjoining mine and converted it into a shop, which, from the peculiar arrangement of the houses, was considered by my friends, and, of course, therefore by the whole neighbourhood, to belong to me. This gentleman, moreover, put “Advice gratis—Physicians’ Prescriptions prepared,” &c. &c. in his windows. This was by no means agreeable to me, and was calculated to do me much injury, by destroying, in a great measure, the advantages of the situation which I had chosen. I could not remove without a great sacrifice, and my only alternative was to make known the plan of remuneration which I had for some time adopted, that the families around might distinguish between me and my neighbour, (upon whom I wish to cast no reflection, but merely exercise the right of defending my own interests); and, after much reluctance, I did this by the note which you have published. What there can be dishonourable, or of the nature of quackery, in circulating such a note, I am at a loss to discover; and those of my professional brethren who know me, will, I am certain, acquit me of any improper motives.

I trust to your candour for the publication of this reply, and I am, sir,

Your obedient servant,

J. MACKELCAN.

6, Devonshire-Street,
Portland-Place, 3d Jan. 1831.

REPORTS OF CASES OCCURRING
AT PUBLIC INSTITUTIONS.

LA CHARITÉ.

*Large Inguinal Hernia—Strangulation
—Operation—Rare Accident.*

DEC. 3.—A male patient, in La Charité, aged 36, and who had long been affected with a large inguinal hernia of the right side, which was reducible, and negligently supported by a bandage, on making some violent exertion, felt a fresh portion of intestine escape, and which he tried in vain to replace. M. Roux was called at nine o'clock in the evening, being ten hours after the accident, when he found the inguinal region and scrotum occupied by a tumor as large as a child's head, and the patient suffering from hicough and vomiting. He immediately proceeded to operate, making an incision which involved the abdomen more than the tumor itself, thus satisfying two principles—the first being to bring the point of strangulation, viz. the ring, fully under view; and the second, that of avoiding to expose the herniary tumor to too great an extent. The bistoury, and grooved sound, reached the sac, from which some fluid escaped, when the finger, carried up to the ring, enabled the surgeon to discover that the strangulation was not very considerable, not being produced at the neck of the sac, as is common. A slight incision on the thin edge of the ring enabled the reduction to commence, which, however, went on very slowly, owing to the extent of intestine, (three feet) which was displaced, and which it was necessary to reduce by little and little. The operation was also retarded by the restlessness of the patient, who contracted the abdominal muscles powerfully.

The alvine evacuations returned next morning, but on the evening of the same day a portion of intestine came down again through the wound, notwithstanding the method of dressing always adopted by M. Roux. This complication, which is very rare even in the ordinary method of dressing, displayed itself by the recurrence of the symptoms of strangulation. The dressings were removed, when the intestine was discovered in a state of inflammation, not livid, but red. The reduction of this second portion was followed by

peritonitis, which required blood-letting, local and general, and the application of emollient cataplasms.

Dec. 8th.—Patient doing well.

The professor, in speaking of this case, remarked upon the difficulty and inefficiency of the taxis in cases of large hernia, and the danger of delay with regard to the operation.

*Encysted Hydrocele — Castration —
Alarmng Hæmorrhage from the
Cord.*

A young man, aged 24 years, received, many years ago, a blow on the right testicle, in consequence of which that gland insensibly acquired an increase of volume and consistence, but without pain. The testicle was moveable in the scrotum, about the size of an egg, had a certain weight, and appeared equally indurated at all points. The employment of a variety of remedies, with a view to produce its discussion, had no effect, and M. Roux resolved to extirpate the gland, which on the 17th Dec. he thus proceeded to do. The patient being laid on a mattress, a tranverse plate was made of the skin, at the inguinal ring: this was divided with a bistoury, and the incision extended to the lowest part of the scrotum. The testicle was easily detached from its laminous adhesions, and dissected up to the ring. The cord, which was of "a certain length," and perfectly entire, was then laid hold of by the operator with two fingers near the testicle, and divided with a pair of scissors; but after this was done, the cord retracted so as to escape from his grasp, and was lost at the upper angle of the wound, hæmorrhage ensuing to such an extent as to require a laborious search, and the ligature of two or three small arterial branches, but not those of the cord. Nevertheless, the bleeding seemed to be completely arrested, and the wound was dressed, with a view to its immediate union. Some hours after, the state of the bandages indicated the recurrence of the hæmorrhage, and M. Roux, who was sent for, applied a tourniquet round the pelvis, so as to make pressure on the inguinal canal to as great an extent as the want of a proper *point d'appui* rendered possible. The bleeding was thus stopt, and did not recur.

The operator expressed his regret that he had not cut the bridle of the cord before dividing it entirely, a me-

thod by which, he said, he would have been enabled to follow and secure the cord after its retraction. The plan of putting a ligature *round* the cord was mentioned as frequently followed by injurious consequences. Why not have put a thread *through* the cord, as done in this country?

ABOU-ZABEL (EGYPT).

Ligature of the External Iliac Artery.

M. S. an Arabian soldier, aged 36 years, of good constitution, was admitted into the military hospital at Abou-Zabel, June 1st, 1828, for a venereal affection. The examination of the genitals led to the discovery of a tumor at the upper and inner part of the left thigh. It had a large base, and was about the size of an orange; it pulsated synchronously with the artery at the wrist, and a distinct sound was heard on applying the stethoscope. The whole limb was increased in size, but the swelling was most perceptible in the thigh, the circumference of which below the tumor exceeded that of the other limb, at a corresponding point, by $2\frac{1}{2}$ inches. On the outer side, and about two inches from the tumor, was a small cicatrix.

The patient being interrogated as to the first appearance of the tumor and its cause, stated, that about ten years before, when watching in a field during the night, he was attacked by robbers, and received a thrust of a lance in the thigh at the spot indicated by the cicatrix. The wound was followed by profuse bleeding, during which he fainted, and remained four hours on the ground without any assistance. He was then carried into his house, and an Arabian surgeon sent for, who employed some means to stop the hæmorrhage. Considerable swelling followed in the groin and adjacent parts. During eight or nine days frequent hæmorrhages occurred, and only ceased on his fainting. At length inflammation, ending in sanguinolent suppuration, came on, which lasted for three months, after which the wound cicatrized. There remained, however, an aneurismal tumor in the groin, which very gradually increased till it attained the dimensions above stated.

The patient was first treated for his syphilitic affection, which was entirely

cured within a month. He was then sent into the surgical ward, and it was resolved to tie the external iliac; but as his pulse was rather quick he was previously bled twice, and put on a restricted diet.

July 7th.—The operation was performed by M. Clot, in the presence of the Professors of the Medical School. The patient being laid on a bed, an incision was made, commencing at the middle of the crural arch, and prolonged till an inch and a half above the anterior superior spinous process. The first incision divided the skin throughout, but the patient struggled so much that the greatest caution was necessary in proceeding, with the aid of a grooved director, to divide the muscles. When the peritoneum was exposed, the efforts of the patient protruded it at the aperture, and it must have been ruptured had not one of the assistants very carefully supported it with his fingers. A triple thread was passed under the artery, and tied with two simple knots. The pulsation of the tumor immediately ceased, its apex became flaccid, and the wound was united by means of adhesive plaister. The operation was completed in five minutes, and at most only an ounce of blood was lost. Immediately after the operation, when the patient was placed in bed, the pulse, which had been from 75 to 80 for several days previously, came down to 60; in six hours it was at 70, and next day had returned to 80.

The patient required to be bled once or twice, and to be kept low for some time, but upon the whole did well; and the wound was completely cicatrized by the 3d of August.—*Lancette Française.*

SIR P. DUN'S HOSPITAL, DUBLIN.

Enlargement of the Spleen, successfully treated by Iodine.

JAMES LAURENT, aged 38, admitted on the 4th of August, with considerable enlargement of the spleen, extensive disease of the cervical and axillary glands, acute inflammation of both knees, and severe pains affecting the larger joints, inflammation of the periosteum, covering the middle part of the spine of the left tibia, a similar swelling situated on the right tibia, a little above the internal ankle, œdema of the lower extremities, general wasting, and adynamia.

About nine years ago he had some disease of the liver, for which he took mercury, under the care of a physician at Mullingar; three years ago he was attacked again, with symptoms of enlargement of the liver, and used calomel and mercurial plaisters, by the advice of Mr. Kirby, with considerable benefit. While under the influence of the mercury, he had gone abroad constantly. He was soon after attacked with pains in the knees and larger joints, and some time afterwards was admitted as a patient into Sir P. Dunn's Hospital, with jaundice, and pain in the right hypochondrium. Here he was treated with leeches to the side, calomel again to salivation, and warm baths, by which the hepatic affection was relieved. About a year since, he was treated by a surgeon for the pains in the joints, with calomel, and mercurial friction to salivation, without any benefit.

At the time of his admission the spleen was much enlarged, but not painful; one of the lymphatic glands below the clavicle on the left side, and four in the cervical region of the right side suppurating, knees swollen and painful, particularly the right. He also complained of considerable tenderness of the ossa nasi.

Hab. Mist. Colchici, $\bar{5}$ vij. Magnesiae Usto, 3j. Sumat, $\bar{3}$ j. ter dic. 3j. of the Ung. Hydrarg. Fort. to be rubbed in every night over the region of the spleen.

9th.—Pains in the joints still continue; right knee hot, tumid, and painful; complains of great soreness in the nose, and offensive discharge.

Ordered to continue his medicines, to syringe the nostril with one part of supernitrate of mercury, and four of olive oil; to be cupped on the knee.

11th.—Right knee relieved by the cupping; complains now of the left, and of severe pains in the ankles; gets no sleep at night. $\bar{5}$ ss. of tinct. opii to be added to his colchicum mixture.

Haut. anodyn. h. s.

15th.—No diminution of the spleen; diarrhoea, with griping; severe pains in the knees and ankles; great prostration of strength.

Haut. Olei Ricini Tinct. Opii \mathfrak{mxx} .
Omit. Ung. Hydrarg.

23d.—Pains as before; diarrhoea still continues.

Haut. Rhei C. Magnesia. Repeat his medicines.

Sept. 2d.—Pain in the left knee increasing; diarrhoea unchecked; a blister to the

abdomen, which succeeded in checking the diarrhoea almost immediately.

11th.—Has been placed under Dr. McDowell's care, who ordered to have the left knee, which was swelled and very painful, cupped to $\bar{3}$ x. and his colchicum and anodyne repeated.

15th.—A portion of the ossa nasi exfoliated; pains still severe; glands of the neck still suppurating; spleen undiminished; slight return of diarrhoea; diffused inflammation of the integuments and cellular substance, extending from the inflamed axillary glands to those above the clavicle.

Cucurbit. cruent. genu sinistro.

17th.—Pain in the knee relieved by cupping; other symptoms as before; ordered to have a blister over the inflammatory tumor, near the clavicle, which is extending in the cellular substance.

lb. j. of the Decoct. Sarsaparilla daily.
Extract. Cicutae, gr. ij. o. n. e. m. To omit his other medicines.

20th.—Diarrhoea checked; pains in the knees better; sleeps badly; to repeat his medicines as on the 17th, and to have an anodyne at night.

25th.—Feels stronger; less pain in the joints; discharge from the glands lessened.

To continue the Decoct. Sarsaparilla, and have ten drops of the Tinct. Iodinii three times a day. Half a drachm of the Ung. Hydriod. Potassae to be rubbed over the enlarged spleen every night. Haut. anodyn. h. s.

29th.—Improving; less pain, but considerable stiffness in the knees and ankles; a warm bath.

Oct. 7th.—Strength rapidly increasing; cervical glands nearly cicatrized; spleen considerably diminished; continue his medicines as on the 25th.

12th.—Continued improvement; no pains in the joints; stiffness nearly gone; moxa to be applied over the inflamed tumor, near the clavicle.

18th.—Going on well; inflammation arrested by the moxa, tumor in the splenic region "much lessened."—*Medical and Surgical Journal*.

NOTICE.

The letter of Mr. Moss, containing a guinea for the family of the late Dr. Nuttall, has been received, and the money forwarded to Mr. Tucker. We are sorry that we cannot afford space to insert any more letters on this subject, otherwise we should have given a place to that of Mr. M.

W. WILSON, Printer, 57, Skinner-Street, London.

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SATURDAY, JANUARY 15, 1831.

CLINICAL LECTURE,
DELIVERED BY DR. ELLIOTSON,
January 3, 1831.

*Cutaneous Affections; (Impetigo and Lepra.)—
Bronchitis—Epilepsy—Remittent Fever—
Efficacy of Croton Oil—Intermittent Palsy—
Disease of the Heart and Lungs—Dropsy.*

On Thursday week, gentlemen, eight patients were admitted into the hospital under my care—five women and three men.

Among the women was a case of *impetigo* of the hands, which was rendered particularly interesting from the resemblance it bore at first sight to pustular itch: this was so great, that any one who had only seen two or three cases of the latter affection would, I am satisfied, have concluded that it was of that nature. The hands were both rather swollen, but particularly one of them, very hot, covered with scabs in a state of discharge, and there were a few pustules here and there. It, however, differed from the case of pustular itch which you saw a few weeks ago in William's ward, in the circumstance that this was confined to the hands, whereas in the case of itch the feet and hands were both affected, and also some parts of the body. In the next place there was heat, burning, and smarting, rather than itching. In the third place, although there were a few large pustules, a few phlyzacia, the chief part of them were of that kind which is called *psyracium*; not large, flat, full, circular pustules, with a hard, inflamed, and elevated base, which I stated to be the qualities of phlyzacia. In this case the base was not elevated; the pustules themselves were not elevated, but flat, and by no means full. Two or three of the pustules which existed were certainly very much of a phlyzacious character, but the great mass of them were *psyracious*—that description which occurs in *impetigo*. In the next place, I observed none of the vesicles which occur in itch. In the other

case, besides the pustules of the ordinary phlyzacious character, and attended by great itching, there were a large number of minute vesicles, many of them with merely watery heads; many of them, too, had lost their heads, and had become slight elevations with black summits, just as you see in common itch;—in other words, there was common itch united with pustular itch, which is generally the case when the affection assumes the pustular form. In the present instance, however, there was nothing of this kind; the root of each thumb was clear, and also the wrists; and therefore I had no hesitation in pronouncing the disease to be *impetigo*. In itch you almost always see the true little itching vesicles, many with black summits, at the roots of the thumbs and on the wrists. Itch, too, is rarely confined to the hands. The feet, ankles, axillæ, and breast, at least, also suffer in most cases; and had the characters of the eruption not decided me, all difficulty must have vanished when I heard her say that no one with whom she lived had caught the disease, that she had experienced it before; and for many years, when younger, had been plagued with an eruption on the head, and nothing more. In the former case I employed sulphur ointment immediately, but in this instance I did nothing of the kind. I bled the patient in the arm, and the blood proved very buffy. I applied cold water to the parts, and sprinkled them with oxide of zinc. The patient at once improved, and is now mending very rapidly.

Another case was of *lepra*. It was a very fine specimen of *lepra* in a young woman, and had only taken place about five weeks. Some of the patches were very large—the size of half-a-crown; they were all circular or oval, and the largest of them occurred chiefly on the extremities. I found that, in her case, there was *drowsiness, heaviness of the head, giddiness, and pain of the head*. She has been bled twice, and finds herself considerably better. No medicine has yet been given to her, as I intend to see

the effect of bleeding, there being decided phlogistic symptoms about the head. The blood was not buffed, but, notwithstanding that, the inflammatory symptoms about the head were quite sufficient to indicate the loss of blood.

Bronchitis.

There was also admitted a case of *bronchitis*, which was characterized by sonorous rattle in various parts of the chest. There was merely soreness of the chest without further pain, and there was likewise rapid respiration. The patient got well simply by bleeding. The case was not so severe as to excite any apprehensions of danger, or induce me to give her mercury. I bled her, and put her on low diet. She was bled twice; the blood was buffed, and she is already well.

Epilepsy.

Among the men three cases were admitted. In the first place was a case of *epilepsy*. It occurred in William's ward, in a young man, *æt.* 24. I think of all the diseases of the nervous system in which sense or motion is disturbed that we have to treat, epilepsy is the most common, next to paralysis; it is infinitely more common than shaking palsy, St. Vitus's dance, tetanus, insanity, or chronic hysteria. It occurs much more frequently in males than in females, while St. Vitus's dance occurs more frequently in females. It occurs particularly in young persons, whereas palsy, the other disease equal to it in frequency, or surpassing it, occurs chiefly in middle-aged and old persons. You will always find a number of patients in the hospital labouring under the disease; and, indeed, we might fill many wards with them. There are several cases now in the house illustrating the disease exceedingly well.

There is a case in William's ward which I admitted some time ago, of a young man in whom the disease appeared to arise from violent muscular efforts. I have several times seen the disease take place after violent muscular efforts, which drove the blood violently to the head, and likewise prevented its return. Violent muscular efforts are proved, by experiments, to drive the blood more forcibly along the arteries, and also to impede its return into the heart by the veins. From both these circumstances an accumulation of blood takes place in various parts of the body, and some persons suspect that one use of the spleen is to furnish a diverticulum for the blood—to receive an accumulation of blood when all parts do thus not admit of their usual supply, and thus to prevent the blood from accumulating in parts where an excess might be dangerous. I believe that Dr. Rush, of America, first proposed this theory, and it is certainly true that the spleen is a very quiet organ in the economy, and will distend under a dilating force to a considerable

size. However this may be, the accumulation of blood in the head under muscular efforts is one cause of epilepsy, and was the principal cause in this young man admitted some time ago; though perhaps the disease has likewise arisen in some measure from the practice of masturbation. It is said by writers that this practice has a tendency to produce the disease; and, if so, it is very probable that the predisposition might thus be acquired by the lad, and that the muscular effort was only the exciting cause. Whether this be true or not, the patient confessed that he had been addicted to the vice. He complained of nocturnal pollutions; and when a person complains of them to any great extent, you will generally find that he has been addicted to this vice. Of course all persons, perfectly chaste, are liable to these things at intervals; but when an individual has them to great excess, and not from a debilitated state of body induced by other causes, you will generally find that he has produced a morbid irritability of the parts, and a habit of inordinate secretion, by the practice. This case illustrates a fact which you will frequently observe in epilepsy and other diseases of the nervous system—namely, that it is united with other nervous diseases. What we call *nervous diseases* are really so many symptoms of certain affections of the nervous structure; a little increased intensity of the affection, or a little extension from one part of the nervous system to another, or the occurrence of it in some other parts of the nervous mass, will produce different symptoms—so that if chronic inflammation, or organic change, affect two or three parts of it, you will have two or three nervous diseases.

Now this instance of epilepsy is attended with hypochondriasis. The patient is only two or three and twenty years of age, and yet he is in a state of complete hypochondriasis. It is quite amusing to hear him talk, and he has sometimes really frightened the sister of the ward. He imagines that he is going to die; he says that he cannot get out of bed, that if he attempts to stand his knees go from under him, and when he comes down stairs he creeps along. He says at one time that he has dreadful suffering from a tingling of the scrotum; at another time he has dreadful suffering from twitches about the ankles; and at another he suffers dreadfully from a quivering of the lips. If you ask him seriously, so that he does not suppose you are laughing at him, whether his finger aches? he says seriously, "Yes." He has no fixed fancy in his mind, but is in continual apprehension. He speaks so gently that you can scarcely hear him; mopes all day in a corner, and informed me with a very piteous look, at the last visit, that, for the first time these three weeks, he had almost had a nocturnal pollution, having

awakened only just in time. You cannot inquire respecting any part of the body without finding that some sensation or other occurs in it which is a source of great anxiety to him. I have no doubt that these symptoms arise from a certain part of his brain being affected; and as the affection which has produced the epileptic symptoms has yielded to repeated local bleeding, the other affection is also probably inflammatory, and I shall persevere with the same measures to reduce it.

As to the case of epilepsy which was admitted on Thursday week, it occurred in a young man, æt. 24, and had only existed three weeks. The cause of it in him I could not ascertain, but the case is useful as pointing out what it is very important to know, and which, I believe, is by many persons passed over, or mistaken. Before he had his epileptic fits he had what he called fainting fits. I know that many persons are said to have fainting fits when they have imperfect epileptic fits. In perfect epilepsy a person loses all power over the body, loses his consciousness, and has convulsions. The loss of consciousness will sometimes alone happen before epilepsy is fully formed—before there are any convulsions. The person loses his power and consciousness, and if this last for a minute, or half a minute, of course he drops down senseless. If the epilepsy be still more imperfect than that arising from the absolute loss of consciousness, the patient will suddenly fall, but only half senseless, or, in a still less impairment of consciousness and power, he will be only about to fall, and be still able to support himself by means of any thing near him, and immediately recover. Here the loss of consciousness and power is not entire; the patient almost forgets where he is, but still is conscious of existence; and though he is not able to support himself alone, he does the best he can, and if near an object, may succeed in not falling. Now this is called fainting, but there is no affection of the heart in the case whatever; the person's face does not become pale, there is no quickness of respiration, no diminution of the force of the pulse, and nothing at all in his appearance that looks like fainting, excepting that he cannot support himself, looks lost, and that he loses a certain part of his consciousness and voluntary power. This is a thing continually occurring in people who, after a time, lose their consciousness more and more in the attack; lose it at length perfectly; then lose it longer and longer, and finally have convulsions in addition.

It is stated by this youth, that formerly he was subject to what he called fainting fits, and now he has regular epilepsy. He loses his consciousness completely, foams at the mouth, bites his tongue, and is convulsed universally; has all the marks of the dis-

ease. What he calls fainting fits were no doubt imperfect attacks of epilepsy. You will see this most frequently in elderly people. They will fall down in a moment, and be completely lost. These cases have by many been called apoplexy; but there is no danger at all in them, and you are not under the necessity of bleeding in them, for the patient will come round spontaneously, even though he have a great number of attacks. I have seen persons who have said they have been subject to these attacks for many months, and even years, and where the affection had not been followed by paralysis, or any other disease except the perfect form of epilepsy—complete loss of consciousness and convulsions of the body. It is important to know this, because otherwise you might suspect that a person was labouring under apoplexy, and you might give an unfavourable prognosis; and if you treat the patient in the attack as if he fainted, you would keep him horizontal, when the nature of the case demands the elevation of the head and shoulders.

I think the best information upon the subject is in Dr. Pritchard's work on Diseases of the Nervous System. It is a book full of information, very sound, and contains accurate views of the diseases of the nervous system.

It is very curious to observe the different degrees of the loss of consciousness from falling down apparently apoplectic—only that there is no stertor, nor great turgence and blueness of the face, or only in a minute degree—to the slightest attack of the affection. When the patients thus fall down in apparent apoplexy, they will come round of their own accord, without any measures being adopted; but if the person be of a plethoric habit it may be necessary to bleed him, because epilepsy will sometimes end in apoplexy. This is by no means a rare occurrence in old persons, and therefore sometimes it may be necessary to bleed them in the arm, or to cup them, but the case does not call for those vigorous measures which real apoplexy for the most part does, and though the course of treatment required may be antiphlogistic, it may be milder than that demanded after apoplexy.

In the last clinical lecture I mentioned a case which illustrated another circumstance in epilepsy, and to which I then sufficiently alluded—the occurrence before the fit, or at its commencement, of an odd sensation along the skin, which is called *epileptic aura*. The case spoken of to-day illustrates a variety which may occur in the fit; and there is now in the hospital a case illustrating another variety—that of epilepsy being partial. Epilepsy is *imperfect* when there are no convulsions with the loss of consciousness, or when there is no loss of consciousness with the convulsions, or when either of these takes

place only in an imperfect degree—the convulsions, for example, being mere tremors; and it is *partial* if the convulsions affect only a part of the body. There is a little boy labouring under diseased bone and anasarca, in a horrible state, in Jacob's ward, who has partial epilepsy. I believe it affects only one half of the body; one half of the face is convulsed, and the corresponding half of the body is agitated, shaken, but hardly agitated so much as to deserve the word convulsed; still, however, the motions are of a convulsive character. Sometimes you see epilepsy more partial than this, affecting only an extremity. I have seen persons subject to epilepsy of this description, and after a time they have had full epilepsy. They will be seized with a violent shaking of the arm, and the paroxysm is nothing more than epilepsy occurring in a partial degree, exactly as paralysis may affect nearly the whole of the body excepting the nerves of the muscles of respiration, till these also become affected, and death ensues; or it may affect only half of the system, or only a leg or arm, or part of the face.

Remittent Fever.

There were two cases admitted, one of which appeared to be *remittent fever*. It was very difficult to get an account of the man—I could not learn that he had been in an aguish part, but he had been ill seven days. He, however, resided in Thames-Street, and had been some way along the banks of the river, though hardly into the country. He was seized on the Thursday before with violent shiverings, by violent heat and afterwards sweating, and he had also pain of the head. When I saw him he was shivering; his account, however, was imperfect as to the period of the day at which the attacks came on, but it appeared that he was affected with rigors at different parts of the day. Under these circumstances I considered his disease was remittent fever. Remittent fever will frequently occur insidiously, and unless you are quite up to it, you may as easily pass it over as some forms of epilepsy. I have had many cases of remittent fever which, in addition to the symptoms of continued fever, were merely characterized by excessive sweating; and other cases, in addition to the symptoms of continued fever, characterized by shivering at different times of the day;—but there are other cases, again, in which the disease is perfectly clear from the train of shivering, heat, and sweating, taking place violently at certain periods in the twenty-four hours, or at certain more distant periods. In other cases there is no shivering nor sweating at intervals, but occasional and perhaps periodical exacerbations of the heat, quickness of pulse, &c. In both such instances the disease is fully marked, but frequently the aguish character of the fever is only marked by

occasional simple shivering or occasional simple sweating; and that these diseases have been remittent fever has appeared from the rapid way in which they have yielded to the free exhibition of bark, after the failure of the ordinary remedies of continued fever.

In the case of this man the remittent fever was becoming continued fever; his tongue was brown; he was more or less delirious constantly; his mind wandered, and was more or less in stupor; he was very deaf, and it was necessary to combine the treatment for the two species of fever. It was requisite to apply blisters at the back of the neck, and give him mercury. He took five grains of hydrarg. c. creta, and he also took the new French remedy, *Salicina*. There has been a remedy discovered by the French, procured from the willow, which is said to be as effective in the cure of ague as quinine. This man took the remedy in the same doses—that is to say, he took five grains every six hours, and he is now doing remarkably well. I have, in fact, in typhus fever, given the sulphate of quinine with considerable benefit, several grains every few hours. The debility of this man would have induced me to give him this remedy even had he not had the remittent form of the disease. When I found him shivering in bed, and ascertained that he had lived at the water-side, and had been near the tower-moat, which for some time past was a disgraceful focus of malaria and ague, I had no hesitation in giving him a remedy of this description. I am anxious to ascertain the powers of salicina, because when they are once established, so that there will be a demand for it, it will be sold at a cheaper rate than the sulphate of quinine; although that is now exceedingly cheap, compared with the original price of three guineas per ounce. This is what I am told, although of course I am not very conversant with these matters. This man took the same dose as is given of sulphate of quinine in severe cases, and it appeared to have the same effect as quinine—that is to say, it neither sickened him nor heated him; it was as innoxious as the sulphate of quinine *usually* is; he still takes it, and is mending rapidly.

There was also a case admitted which I *fancied* might be *remittent fever* likewise, but really, from the state of the man's mind, I hardly comprehended the nature of the affection. The man told me that he frequently had shivering at different periods of the day, and he afterwards told me that he had it at certain hours, and then only at 12 o'clock at night; altogether he could not give any account that at all satisfied me. I cannot positively assert, but I have a strong suspicion, that he is a little deranged. He, however, shewed sufficient signs of inflammation, in a few days, of the chest, to ren-

der it necessary to bleed him; and observing the irritation in the functions of the head, I also deemed it requisite to have him cupped at the nape of the neck. He was bled twice, to the amount of sixteen ounces each time, for the bronchitis, and afterwards it was necessary to take fourteen ounces from the back of the neck. The great thing to be treated was the inflammatory disease of the chest, and from the degree of delirium which existed, and the strength of the pulse, it was necessary to take blood from the head; but whether he had been more or less deranged before hand, or whether the head was in a state of excitement from the feverish condition into which he had been brought by the pectoral inflammation, I cannot say: he could not describe his symptoms to me at all, and therefore I was very much in the dark.

Efficacy of Croton Oil—Epilepsy.

During the week six cases were presented, and among them was one of *epilepsy*, which illustrated the common form of the disease—the simple, perfect form of the affection, and the mode of treatment which is the most successful.

The affection occurred in a woman, æt. 30, who had been ill two years, ever since her last pregnancy but one. She was first seized when walking in the garden during the summer, but whether the heat of the sun-beams playing upon her head had produced it, I do not know. She was, however, subject to vertigo, a throbbing in the head, and some hysterical symptoms: but the epilepsy was shewn by her being insensible during the fits, and foaming at the mouth, and complete loss of consciousness. The epilepsy began during the second month of her last pregnancy but one, and she lay in also seven months ago. There was nothing peculiar in the affection whatever: it was the regular form of the disease, but it was interesting as shewing the use of antiphlogistic measures alone. I believe that by far the most successful treatment for epilepsy is that of keeping down fulness and an inflammatory state of the head, and she was accordingly bled to fainting twice. She was cupped on the occiput, and after that twenty leeches were applied, her bowels being regularly opened with croton oil, and under that treatment she did very well. She never had a fit after she came to the hospital. She was admitted on the 16th November, and presented on the 23d December. She took half a minim of croton oil every day.

I am anxious to impress you with the great use of croton oil in keeping the bowels regularly open. Every practitioner knows the great use of this medicine as a strong purgative, but I am not aware that it is sufficiently used for merely keeping the bowels open. There are some persons who cannot have a motion every day without the aid of

medicine. To some persons it is perfectly natural not to have a stool every twenty four hours, some few have only one once a week, or once in ten days, and instances have occurred where there has only been a stool once a month habitually, and yet the persons been in perfect health; most persons, however, are better for having one every day, and uncomfortable if they have not. It is frequently much the best for an individual not to take opening medicine if his bowels are only accidentally confined, for nature will generally relieve herself in a day or two without any assistance from art, and a habit of taking purgatives is much better avoided. There are many persons, however, who are ill if they pass the usual time, and nature is not always able to adjust matters herself, and in some cases it is necessary, on account of other diseases, that the bowels should be regularly open. This was the case in this woman. I was anxious that she should daily be rather purged, and for this purpose, as well as for procuring a regular daily evacuation, I think no medicine so useful as croton oil—say the fraction of a drop, the sixth, or the fourth, or the third of a drop, once a-day. Some persons may take the eighth or tenth of a drop every night or morning, mixed up in any aperient pill. This not only procures a regular motion, but the medicine will not lose its effect; I have very seldom, indeed, met with a case of failure. The great complaint against all aperient pills, is, that after a time they lose their effect. You find when persons have taken a few boxes, that two must be taken instead of one, or three instead of two, and at last they will take several without any effect being produced. If you put into any pill a portion of croton oil,—say one, two, or three drops, into twelve pills, and give one daily, or every two or three days, you generally find the medicine preserve its opening powers—it is a rare thing for it to lose its efficacy. On the other hand, I continually find that less and less of this medicine answers, and that the quantity may be diminished. If you begin with half a drop every night, the patient will soon require only one-third, and at last only one-fourth. I have known instances of persons who required half a drop, ultimately come to need only the tenth of a drop, although they had previously been habitually constive for many years; had been tormented, indeed, during the greater part of their life. I think one of the most valuable properties of croton oil is where it is exhibited in minute and habitual doses. Still, however, it is to be remembered that some persons cannot bear it at all; there are some persons whom it will always make sick in any quantity that is sufficient to evacuate the bowels, and there are others whom it always gripes. You will find a peculiarity of susceptibility in different people to all medicines—sulphate of quinine, iron, rhubarb, and nearly every article of the

materia medica: indeed every article of food disagrees with somebody or other. I think you will find croton oil a very valuable medicine when employed in the way I have pointed out. Many persons I have known who have been in the habit of taking calomel or blue pill to open the bowels, than which I do not think there can be a worse practice, because it produces a constitutional effect as well as that upon the bowels: it keeps them in a state of more or less debility of stomach, and renders them very susceptible of taking cold: it does more than you desire, and does not act as a mere aperient. If, instead of putting a grain or two of calomel into an aperient pill, you employ the croton oil, you will find it answer perfectly well, and the constitution will be uninfluenced. This woman took a considerable quantity of the remedy—that is to say, she began with half a minim every day, because her bowels were very torpid, and it was an object with me to purge her, to carry on antiphlogistic measures briskly, and she took, likewise, camphorated mixture, or assafoetida mixture, on account of her flatulence and globus hystericus. She had not a single fit while she was in the hospital, and she went out perfectly well, but of course liable to a return of the complaint if she indulge in good living, and drink malt liquor, wine, or spirits.

Intermittent Palsy.

There was a case of disease of the nervous system presented of a curious character, the first of the kind I have ever met with—*intermittent palsy*. I have read of it in authors, and you will find it mentioned by Cullen—*paralysis intermittens*. Now among all the patients I have ever seen, and which are between 30 and 40,000, including those in various public establishments and private practice, I had never seen an instance of this description. This was a case of intermittent hemiplegia. The man was admitted into Jacob's ward some time ago, and I mentioned his admission at the time. I gave him no medicine, because I was desirous of seeing whether his account was true or not. I seldom give medicine in aguish or intermittent complaints till some one in the hospital has witnessed the occurrence of the paroxysms. He staid here three weeks without having a paroxysm; he was, however, a very respectable man, and I did not doubt his account. He then went out of the hospital, enjoined by me to return if his disease reappeared. One day when I came to the hospital some time afterwards I found him in the courts, and he said he had been seized with a paroxysm that morning, and he actually was then in a state of hemiplegia of the left side. I saw it myself. I made him walk, and he dragged his leg in a semi-circular way, as patients usually do when they are labouring under hemiplegia, and he could not raise his left arm. It began at 10

o'clock, and this was the usual course of the disease. He had told me originally that the paroxysms came on at 10 o'clock in the morning, not every day, but every third or fourth day, and, with a single exception, never after a longer period than that; but on one occasion there was an interval of sixteen days. He had been subject to this affection for two years and a half; he was 48 years of age; and the paroxysm would last from three to four hours; but although it only lasted that time, he was not perfectly clear from it the whole of the day. He never knew the paroxysms begin later than 11 o'clock, or earlier than 10; that was the regular period, from 10 to 11, till a week before he had been admitted, when one attack came on at half past 10 in the evening—the usual hour, but in the evening instead of the morning. The affection was not more frequent then than when it first began. The man looked sickly, as if he had ague; but still more as if he had suffered from a hot climate, and it appeared that he had been in the East and West Indies—that he had had fever both at Bombay and Batavia. He had suffered from dysentery, and when he was in the hospital he had diarrhœa. I do not doubt that this was the effect of malaria—that his hemiplegia was a form of ague. I will not quarrel about words, you might say it was not ague, because unattended by shivering, fever, or sweating; but I have no doubt it was as much the effect of malaria as ague is; it was merely a variety of the same affection of the system. Supposing this to be the case, and witnessing a paroxysm myself, I now gave him the sulphate of quinine, and as the disease was of long standing, I began with a good quantity—five grains every six hours, and this medicine very soon put a stop to the complaint, but not till I had increased the dose to ten grains every six hours, so that he took 40 grains in the 24 hours.

Now this is the dose that is often required in quartan ague, and this was a worse form of the disease than quartan, because it occurred on the third or fourth day, and the longer the interval between the attacks, the greater is the difficulty of curing the affection, which may be considered so much the more of a chronic character; it is not a matter of wonder that that large quantity was required. He continued in the hospital from his first admission on the 13th of October till the 23d of December, which was rather more than three months, without any other attack whatever, and his health greatly improved. It is wrong to suppose that malaria does nothing more than produce these particular forms of intermittent disease; it poisons the whole body, and many persons are destroyed by it who never had ague at all, so deadly is the poison. His health, however, regularly improved under the quinine; he became strong, his countenance was better, and altogether he found

that he had received very great benefit. However, on the 28th of the same month, five days after his presentation, he came to me, saying, that he had had a slight attack—very slight—that morning, but still it was an attack, and it occurred rather later than usual, some little time after 11 o'clock. When I saw him, at about half past one o'clock, it was then nearly gone off. I increased the quantity of sulphate of quinine to fifteen grains every six hours, and if that be not sufficient, I shall give him more, as he is to come to me from time to time. I had a case of a person in the hospital who was not cured of ague with less than a scruple every six hours, and therefore I shall not be surprised if it be required in the case of this man; but I have no doubt that he will be perfectly cured eventually, though he may need very large doses for that purpose.

This is a very interesting case, proving that paralysis is not necessarily an *organic* affection—that hemiplegia does not necessarily arise from effusion, or from compression of any kind, at least of an organic nature. If any compression do occur in this man, it can only be during the fit, for at other times he is perfectly well. It is entirely, I presume, an affair of *function*, induced by a particular poison. I have at this moment in private practice a very curious case, in which disease has arisen from malaria. It has occurred in a young gentleman, living by the side of the Thames, about 11 years of age. He had diarrhoea, which was allowed to run on at school; he was, however, taken home, and treated very properly by the gentleman who attended the family, by applying leeches to the abdomen, and I believe a blister, and all went on very well. He had tenderness just at one side of the umbilicus. He was, however, seized all at once, at a certain hour of the evening, with violent irritation, severe itching, tingling, and redness at the leech-bites, and some feverishness, just at the very part where all the leeches had been applied, and every leech-bite became red and swollen. His sufferings were extreme, and after lasting for a certain time, all these symptoms went away. At the same hour the following evening the same thing occurred, the leech-bites became swelled and hot, and he fell into a state of general excitement, from, as it would appear, the itching and tingling. The medical gentleman immediately saw him, and thought the attack was of an aguish character, and, as the family lived in a low spot by the side of the Thames, he gave this lad 20 grains of sulphate of quinine, in divided doses, before the time of the next expected paroxysm. The attack came on the next evening, but at a later period than usual, shewing that the remedy had produced an impression. It is common for the remedy not to stop the disease at once, but to cause

the fits to be postponed. I, however, was sent for, and I told the family I was quite satisfied that the youth was going on right—that the quinine was the only remedy, and must be persevered in at the same doses. The fits were very distressing, indeed to the family alarming, and we both agreed that it was better to go on with 20 grains in the 24 hours. The next day the paroxysms came on later and more slightly, and then came on once in two or three days, and still more slightly. He presently became perfectly well. At the end of a month he went out of doors, and was exposed to cold, and from his extreme anxiety to regain the time he had lost from school—for he was a fine boy—a paroxysm came on again, but rather mildly. The medicine was again had recourse to, and the immediate effect was a postponement and alleviation of the next paroxysm, and I have no doubt that if he continue to take the remedy for some weeks, he will not have a relapse. These remedies will not cure the disease unless you give them for some time after the disease has appeared to cease. Sometimes it is necessary to give them for many weeks; sometimes it is necessary to do more than this—to remove the patient from the spot. Just as in syphilis; if a person get cured of syphilis, and return to the same quarters, the mercury he has taken will, of course, not prevent him from again catching the disease; so a person may be cured of ague; but if he continue living in the same unhealthy quarters, of course the poison may operate afresh upon him; and as in syphilis mercury must be taken for some time after the symptoms have all disappeared, so must quinine in ague.

Disease of the Heart and Lungs—Dropsy.

I had better speak of the other cases in the next lecture, as our time is exhausted; I will, however, point out to you the lungs and heart of an old gentleman, whom you must have seen several times in William's ward. He came to the hospital last spring, with his legs much bigger than his thighs ought to have been, and his thighs nearly as large as his body should have been. By giving him full doses of elaterium—many grains in the course of a day—after he had been here a month or two, he went out perfectly free from dropsy; however, as he had had an effusion into the pleure and pericardium, and a diseased heart, it was clear that his symptoms would all return. He came back some time ago, with his symptoms more or less renewed, and the disease of his heart was still apparent. There was a violent beating—a strong action of the left ventricle, attended with a bellows-sound. The heart beat violently over a great extent, and the bellows sound was loudest at some distance from the usual part, far to the left side, render-

ing it certain that he had hypertrophy and dilatation, and a difficult egress to the blood in the left ventricle. It was quite clear that there was hydrothorax besides anasarca; on the right side of the chest there was not the least hollowness of sound on percussion, or respiratory murmur, even up to the clavicle, and to some extent there was the same dullness on the left side. There was no rattle; nothing to show any inflammation of the bronchia or air-cells.

Now in opening the heart you will see that the left ventricle is very much thickened and dilated. You observe that the aorta is much diseased. I cannot show you the narrowness of the mouth, because it is all laid open, but on passing the finger down it was found to be exceedingly narrow. The roots of the aortic valves are very much hardened, and the whole is constricted, so that, though the plates of the valves are free from disease, the mouth of the vessel was strictured.

Effusion into the chest will occur from disease of the pleura. You will find in many chronic cases of ascites and hydrothorax—and, by the way, chronic cases of hydrothorax are very rare, excepting as a symptom of disease of the heart—that the pleura and peritoneum are diseased. You see here that the pleura is much diseased—much thicker and harder than it ought to be; there is a chronic organic affection of the membrane. All that can be done in such a case is to excite absorption from time to time by diuretics, and more particularly by strong purgatives, of which elaterium is the best.

The lungs under the diseased pleura were impervious to the air, not exactly in a state of hepatization nor induration, but had become of a very tough impervious character. The liver is more or less diseased; the biliary part is much increased. I believe he had been a hard drinker at one time of his life, and whenever people do this, of course they pay the penalty sooner or later. One of the best sermons for drunkards—for regular and respectable tipplers—would be to exhibit to them the heart, lungs, and liver of drunkards by the side of specimens of sound organs. It would produce more effect than all the good advice that could be given them. I had just begun to exhibit elaterium as I did when he was here formerly, and no doubt should have succeeded a second time in emptying him. I before found it necessary, after trying small doses, to give him daily a grain, and repeat it every two hours till it purged him thoroughly; and gradually less and less had been required. But, poor man, he had become fretful, and having been in better circumstances, began to be haughty and intolerant to the other patients, and at last path himself into so great a rage about some nonsense—some fancied want of respect or attention on the part of I know not whom nor indeed of how many, that he suddenly

fell back dead while drinking his tea—an event by no means uncommon to patients so affected, especially under mental emotion.

SKETCH OF THE STATE AND PRACTICE OF MEDICINE AT CONSTANTINOPLE.

BY C. BRYCE, M.D.*

* * * *

THE chief source of medical practice amongst Turkish practitioners springs from that spirit of charity which so largely pervades Islamism, and of which the foundation of hospitals and the establishment of schools form a prominent feature. Of the former there are several at Constantinople either endowed by revenues from mosques, or directly supported by government, of which the medical attendants are Turks, under the appointment and control of the Hakim Bashi, or first physician to the Sultan. Their internal economy and medical management are, it is true, alike defective, if judged by the double object we propose in such establishments—a charitable institution and a school for instruction; but their immediate general usefulness is not less conspicuous, and their existence affords the ready means at any future period of extending their advantages. The mad-houses, although disgustingly kept, and offering the most deplorable objects to the curiosity of the stranger, show how wisely the Prophet made his scheme of legislative religion subservient to the calls of humanity. Of the schools at Constantinople one is particularly dedicated to medical science, or, more correctly, was,—for, if actually not altogether abandoned, its object is entirely superseded by the new school lately opened, of which I shall afterwards speak. The only previous preparations for this study required of the students, who on an average amounted to thirty, was a competent knowledge of the Arabic, in which language, under the direction of Turkish teachers, they read and learnt to explain the ancient Egyptian and a few European authors. In this course of instruction, which occupied two hours daily, little if any reference was made to anatomy or chemistry;

* Edinb. Med. and Surg. Journ.

and even attendance at hospitals was not comprised. Six or seven years were thus employed, when, without any form of examination, and by a simple license or permission from the Hakim Bashi, the doctoral bonnet might be assumed, and the person was held qualified for the first professional employments of the state. The present Hakim Bashi and his brother, physician in chief of the army, are from this school.

From my observations and inquiries amongst this class of practitioners, the study of medicine is reduced to the knowledge of a few doctrines; and the practice thence promulgated accords with this simplicity. The leading principles are to recognize only three classes of diseases — depraved humours, sudden cold, and great heat; and accordingly, to admit three forms of cure—purgatives, heating medicines, and refrigerants. Other Turkish nosologists adopt a different system, in which all diseases are distinguished into three orders; namely, *nacazil*, *majazil*, and *yel*. To the first, which answers to the genus *catarrhus* of the ancients, belongs almost every disease which has its seat in the head, throat, and thorax. Diseases of the abdomen and affections of the skin are ranked in the second order, which may be translated *hemorrhoidal*. The *neuroses*, whether or not accompanied by *pyrexia*, affections of tendinous parts, &c. are placed in the third class. *Yel* signifies wind; and to its presence and inordinate localities are ascribed the most severe and the most opposite complaints. Other incongruous ailments, not assorting easily with these genera, are implicitly believed to be the effect of Satanic influence; and the treatment of these is, as it should be, entrusted to churchmen, who make, as in other more enlightened countries, a lucrative business, by offering prayers and employing exorcism for the deliverance of those affected.

In prescribing, vegetable preparations are usually preferred, which, as indeed every quality of drug, is administered in the simplest form. It must, however, be said, that if their drugs are subjected to few alterations in the laboratory, yet in the physician's hands they are compounded in the most ignorant manner, medicines of very opposite virtues being combined in a prescription of fifteen or twenty different drugs; and the more lengthy the writing, the more

complex the remedies, the more highly are the skill and learning of the prescriber estimated. Solid purgatives of the strongest kind are freely administered, the more so that Mosleimen have a great repugnance to enemata. Syphilis has been long successfully treated by purgatives and sudorifics, joined to the use of the vapour bath, continued during twenty or thirty days, or until the patient be much exhausted; and this condition is considered as indicating a speedy cure. Emetics are little used, from a great aversion to vomiting. An opinion of a vitiated state, or a false course of the blood, enters largely into their explanation of the cause of diseases; and bleeding, either general or local, fortunately is abundantly pursued; though much of the efficacy of the former is deemed to depend on the nicety with which the physician distinguishes what vein should be opened.

But it is not to the application of rules, or the exhibition of drugs alone, that the Ottomans confide in their treatment of maladies. Ignorance makes them reverence a variety of superstitious remedies; and Turks holding the highest posts of learning and rank are not ashamed to employ openly these productions of fanaticism and charlatanism. Of this credulity, religion is the common basis; and it is matter of daily occurrence to find the Iman supplant the physician, or at least his mediation sought to aid the virtue of the prescription. The practice is varied according to the caste of the Dervisch, and qualified with pomp and ceremony corresponding to the quality of the invalid or price paid. To some the practitioner prescribes a course of several days reading from the Koran, with certain forms of breathing on the patient by one or more of the initiated; while others are ordered to combine the swallowing of bits of almonds, or of pork, eating off particular plates, having words written on them, and in fevers to tie knotted threads on the wrists and ankles.

These simple plans of empiricism, or of gross superstition, are frequently abandoned by the people, especially in lower complaints, for a treatment that so closely resembles magnetism, that, were it not for its more distant origin, it might be pronounced a variety of that process. The operator consulted listens to the case with the utmost se-

riousness, refers to his Koran, and having chosen and written an appropriate passage, folds it in a mysterious manner, and prescribes this to be worn in contact with the part affected; after which, the fingers smeared in saliva are stroked over the supposed seat of disorder, and prayers are recited at three intervals. As Dervishes and Imans are the privileged in this function, it is not to be wondered at if it exercise some influence over Osmaulies; but Christians and Jews likewise have recourse to these magnetizers, who change nothing of their spiritual remedies in regard to Greek, Armenian, or Jew. It is singular enough that the saliva and breathing are used in imitation of Christ resuscitating the dead child, and restoring hearing to the deaf man by anointing him with spittle. Patients are often directed to swallow, several times a day, slips of paper on which the name Allah or Mahomet has been written by some venerated priest or hadgi. Much faith is also placed by Mussulmans in the efficacy of water sanctified by holding in solution passages of the Koran, which an Iman has traced with ink on the inside of the cup; and, incredible and absurd as it may seem, it has happened to several European practitioners in Turkey to find on their second visit, that the true believer has deemed swallowing the prescription left him more advisable than sending it to the apothecary.

From these disagreeable details, sketched with as much leniency as fidelity permits, we turn, with gratification, to the improved prospects of medical instruction offered by the institution lately established at Constantinople.

We have seen the inefficiency of the former means of attaining this object, and its consequent evils; and we are, therefore, disposed to receive with satisfaction, and judge favourably of the endeavour, with all its defects, to bestow on this department a portion of those ameliorations developed in the scheme of military organization and general instruction planned and prosecuted by the Sultan. The groans and murmurs of the wounded of the last war have touched the sensibility of the divan, and shown the Moslem legislators the great necessity of yielding to the calls of humanity, and, by this establishment, of remedying the terribly augmented destruction of their troops

from absence of surgeons. This medical school, at the expense of government, was opened three years ago. It is under the direct control of the Hakim Bashî, whose talents and liberality fully qualify him for this important charge; and by whom teachers are appointed and students selected. It is at present composed of four professors, two for the Arabic and French languages, and two for medicine and surgery, and 140 scholars from 14 to 30 years of age, divided into these several classes. By an ill-advised economy, the salary of the first is too small to encourage any competition of respectable talents for the appointment; and, where the honour and influence thereto attached is questionable, this circumstance must affect the interests and utility of the seminary. But, on the other hand, the pay, rations, and prospects held out to the students, have excited a great eagerness on the part of the better classes of the people to insure their children these advantages.

The first period of this course of education is spent in obtaining a competent knowledge of the Arabic and French languages, the object and utility of which are alike conspicuous. The second is devoted to medicine; but unfortunately the means of imparting or acquiring this knowledge are so imperfect, that it is quite impossible for teachers, however talented, zealous not to compromise themselves, or for pupils, whatever their capabilities and application, not to be disappointed by the event. From the limited time of study, the non-appointment of additional lectures has not yet been so severely felt as the want of those means of practical instruction which are indispensable to the acquisition of useful medical knowledge, namely, anatomical demonstrations, chemical experiments, and hospital attendance. The latter defect was most manifest on my first visit to the institution, on witnessing the eagerness of the young men to impress a favourable opinion of their application, and the interest and pride with which they listened to inquiries and remarks on shewing their manuals of anatomy, physiology, and *materia medica*, a new preparation of the bloodvessels of the head, some plates, and a skeleton, as if these, their library and museum, evinced and insured their acquirements, and unfolded the mysteries of medical science.

The lecture attended fully exemplified

this. The person was surrounded by students in an oriental posture, with a French epitome of anatomy in their hands, from which he was labouring to explain, by translation and reference to a skeleton, one of the most intricate points of surgical anatomy, that of the shoulder-joint. The result of his utmost exertions was to store the learner's memory with technical words, of the import of which they could form no precise or useful application.

This pitiable abuse of time, industry, and genius, on the part of teacher and scholar, must be speedily redressed in the system of education, or experience will effectually support the malevolent ridicule of those opponents whose selfish motives desire its failure; for, besides the positive harm done by teaching nothing, its continuance on the same plan must destroy all habit of reflection or reasoning, and implant false comprehensions of the extent and importance of the study.

These faults, into the origin of which it is useless to inquire, but which are in part inseparable from a system of instruction so little understood and appreciated in Turkey, may be alleviated, if not entirely removed, by the simple authority of the head of the institution, without encroaching on the prejudices of the people or doctrines of the Koran. The only point which has entered into discussion is that of dissections. My attention has been directed to this question by inquiries amongst native practitioners, people of the church, and others capable of knowing; and their uniform answer is, that there exists no law of the Prophet, nor decision of his commentators, against anatomical demonstration, and, therefore, that a decree from the Mufti, or order from the Hakim Bashi, would be sufficient to authorize their performance. It is already fully sanctioned by the precedent of the school of medicine near Cairo. My friend Dr. Clot, who has done himself distinguished honour by that establishment, had influence to obtain from the Pasha an unqualified order to employ the dead of the Military Hospital for this object. No moment can be more propitious than the present for establishing the custom, when the marvellous changes affecting the manners and opinions of the people, and acts of the government, hinder too severe examination of particular measures, and

prepare men's minds for every innovation. It is moreover believed that the spirit of the Turkish religion, which is stript of much of its former fanaticism and intolerance, would be easily reconciled to the matter, and would overcome any scruples which the Dervisch or Iman might oppose to this concession.

It must, however, be confessed that there is no improvement which does not offer difficulties almost insuperable, even proceeding from those for whose benefit such changes would be made; and if the study of anatomy be too much in advance of the progress of general knowledge in Turkey, the only alternative of the government is to adopt the project already contemplated by the Hakim Bashi, namely, to send, at the public cost, a hundred or more clever young men of good families into England and France, where, by intercourse with polished society, they may be emancipated from the stubborn thralldom of native prejudices, and, by a university education, be qualified on their return to become teachers of the various branches of medical education, and wise and influential promoters of the political scheme of instruction.

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LAST ILLNESS, DEATH, AND POST-MORTEM EXAMINATION OF LORD BYRON.

[In a work which has just issued from the press, entitled, "Memoirs of the Affairs of Greece, &c. by Julius Millingen," (a surgeon in the Greek army), an account is given of the illness which proved fatal to Lord Byron. It is spoken of as rheumatic fever, terminating in metastasis to the brain. The narrative is not calculated to impress the medical reader with a very favourable opinion of the author's professional knowledge, and we set more value on his facts than his opinions. The treatment appears to have been extremely inefficient till too late to be of avail. No mention throughout is made of mercury in any form; while, in order to "lower the impetus of the circulating system," Mr. Millingen recommended the *twenty-fourth part of a grain of tartarized antimony* for a dose!]

Among the post-mortem appearances, the state of the skull is worthy of remark; but it must be confessed that the case derives its interest, not so much from its importance, considered medically, as from the curiosity with which we listen to all that concerns the child of genius and passion to whom it relates.]

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On the 15th, towards noon, Fletcher called upon me, and informed me that his master desired to see me, in order to consult with Dr. Bruno on the state of his health. Dr. Bruno informed me that his patient laboured under a rheumatic fever; that, as at first, the symptoms had been of a mild character, he had trusted chiefly to sudorifics; but during the last two days the fever had so much increased that he had repeatedly proposed bleeding, but that he could not overcome his lordship's antipathy to that mode of treatment. Convinced, by an examination of the patient, that bleeding was absolutely necessary, I endeavoured, as mildly and as gently as possible, to persuade him; but, in spite of all my caution, his temper was so morbidly irritable, that he refused in a manner excessively peevish. He observed, that, of all his prejudices, the strongest was against phlebotomy. His mother had, on her death-bed, obtained from him a promise never to consent to being bled; and that, whatever we might say, his aversion was stronger than any reason we could give. "Besides," says his lordship, "does not Dr. Reid observe, in his Essays, that less slaughter has been effected by the warrior's lance than by the physician's lancet? It is, in fact, a minute instrument of mighty mischief." On my observing, that this remark related to the treatment of nervous disorders, not of inflammatory ones, he angrily replied, "Who is nervous, if I am not? Do not these words, besides, apply to my case? Drawing blood from a nervous patient is like loosening the cords of a musical instrument, the tones of which are already defective for want of sufficient tension. Before I became ill, you know yourself how weak and irritable I had become. Bleeding, by increasing this state, will inevitably kill me. Do with me whatever else you please, but bleed me you shall not. I have had several inflammatory fevers during my life, and at an age when I

was much more robust and plethoric than I am now: yet I got through them without bleeding. This time, also, I will take my chance."

After much reasoning and entreaty, however, I at length succeeded in obtaining a promise, that, should his fever increase at night, he would allow Bruno to bleed him. Happy to inform the doctor of this partial victory, I left the room, and with a view of lowering the impetus of the circulating system, and determining to the skin, I recommended the administration of an ounce of a solution of half a grain of tartarized antimony and two drachms of nitre in twelve ounces of water.

Early the next morning I called on the patient, who told me, that having passed a better night than he had expected, he had not requested Dr. Bruno to bleed him. Chagrined at this, I laid aside all consideration for his feelings, and solemnly assured him how deeply I lamented to see him trifle with his life in this manner. I told him, that his pertinacious refusal to be bled had caused a precious opportunity to be lost; that a few hours of hope yet remained; but that unless he would submit immediately to be bled, neither Dr. Bruno nor myself could answer for the consequences. He might not care for life, it was true; but who could assure him, unless he changed his resolution, the disease might not operate such disorganization in his cerebral and nervous system as entirely to deprive him of his reason. I had now touched the sensible cord; for, partly annoyed by our unceasing importunities, and partly convinced, casting at us both the fiercest glance of vexation, he threw out his arm, and said, in the most angry tone, "Come; you are, I see, a d—d set of butchers. Take away as much blood as you will; but have done with it."

We seized the moment, and drew about twenty ounces. On coagulating, the blood presented a strong buffy coat. Yet the relief obtained did not correspond to the hopes we had anticipated; and during the night the fever became stronger than it had been hitherto. The restlessness and agitation increased, and the patient spoke several times in an incoherent manner. The next morning (17th) the bleeding was repeated; for although the rheumatic symptoms had completely disappeared,

the cerebral ones were hourly increasing, and this continuing all day, we opened the vein, for the third time, in the afternoon. Cold applications were, from the beginning, constantly kept on the head; blisters were also proposed. When on the point of applying them, Lord Byron asked me whether it would answer the same purpose to apply both on the same leg? Guessing the motive that led him to ask this question, I told him I would place them above the knees, on the inside of the thighs. 'Do so,' said he, 'for as long as I live I will not allow any one to see my lame foot.'

In spite of our endeavours, the danger hourly increased; the different signs of strong nervous affection succeeded each other with surprising rapidity; twitchings and involuntary motions of the tendons began to manifest themselves during the night; and, more frequently than before, the patient muttered to himself and talked incoherently.

In the morning (18th) a consultation was proposed, to which Dr. Lucca Vaga and Dr. Freiber, my assistant, were invited. Our opinions were divided. Bruno and Lucca proposed having recourse to antispasmodics and other remedies employed in the last stage of typhus. Freiber and I maintained that such remedies could only hasten the fatal termination; that nothing could be more empirical than flying from one extreme to the other; that if, as we all thought, the complaint was owing to the metastasis of rheumatic inflammation, the existing symptoms only depended on the rapid and extensive progress it had made in an organ, previously so weakened and irritable. Antiphlogistic means could never prove hurtful in this case; they would become useless only if disorganization were already operated; but then, when all hopes were fled, what means would not prove superfluous?

We recommended the application of numerous leeches to the temples, behind the ears, and along the course of the jugular vein—a large blister between the shoulders, and sinapisms to the feet. These we considered to be the only means likely to succeed. Dr. Bruno, however, being the patient's physician, had, of course, the casting vote, and he prepared, in consequence, the antispasmodic potion which he and Dr. Lucca

had agreed upon. It was a strong infusion of valerian with ether, &c. After its administration, the convulsive movements and the delirium increased; yet, notwithstanding my earnest representations, a second dose was administered half an hour after: when, after articulating confusedly a few broken phrases, our patient sunk into a comatose sleep, which the next day terminated in death.

Post-mortem Appearances.

The following are the principal phenomena which the autopsy presented. The cranium resembled completely that of a man much advanced in age; its sutures were obliterated; its two tables were united into one; no traces of the diploe remained, and the texture of it was as hard as ivory. The adhesion of the dura-mater to the interior of the skull-cap was extraordinarily strong. Its vessels were large, highly injected, and it had acquired at least twice its usual thickness. Each of its surfaces was covered with strong organized bands, uniting them powerfully to the adjacent parts. Its prolongation, the falciform process, was perhaps even more inflamed, and adhered firmly to the hemispheres; and the tentorium cerebelli, though in a less degree, was also strongly injected. The pia mater presented the appearance of the conjunctiva on an inflamed eye. The whole system of sanguiferous vessels, of the cerebrum and cerebellum, was gorged with blood, and their substance was surprisingly hard. The ventricles contained several ounces of serous fluid.

The lungs were perfectly healthy and crepitant; and what is seldom observed in natives of cold climates, had not contracted the slightest adhesion to the pleura. The appearance presented by the heart was singular. Its parietes were as collapsed, and of a consistence as flabby as those of persons who have died of old age. Its muscular fibres were pale, and hardly pronounced; and the ventricles had no thickness whatever.

The liver was beginning to undergo the alterations observed in persons who have indulged in the abuse of alcoholic liquors. Its bulk was smaller, its texture harder, its colour much lighter than in its healthy condition. The stomach and intestines presented no remarkable phenomena.

ON
STAINS OF THE
CONJUNCTIVA AND OPACITIES
OF THE CORNEA,

Produced by the application of Nitrate of Silver, Acetate of Lead, Oxyd of Iron, Gunpowder, Charcoal, and similar substances.

BY ARTHUR JACOB, M.D. M.R.J.A. *

THE following notice in Mr. Lawrence's twentieth lecture is the only one which I have met with on the subject of stains of the conjunctiva. "The conjunctiva sometimes acquires a livid tint in persons who have long employed the nitrate of silver locally; and as far as I know that change of colour is permanent." This effect of nitrate of silver I have myself for many years noticed in my lectures, and pointed out to pupils attending my practice, and from repeated observations, I can bear testimony to the truth of Mr. Lawrence's remark. The stain I believe to be indelible, even when existing in the slightest degree. I have not observed that the application of even a strong solution for a fortnight or three weeks will produce the effect, but I believe its continuation for six weeks or two months will do so. One practitioner, who was in the habit of using the solution very freely, so frequently produced this effect, that I have often been able to point out his patients by the colour of their eyes. The colour, in cases where the solution has been used for a short time, is a light olive, sufficiently deep, however, to produce very obvious deformity, and to be the cause of no slight regret on the part of the sufferer, especially if a female. If a strong solution has been used for a great length of time, the stain is much deeper, colouring not only the conjunctiva of the eye, but also that of the under lid, upon which, from the vascularity beneath, the colour appears still deeper. This effect of nitrate of silver on the conjunctiva is evidently similar to that caused by the application of colouring matters to the villous surface of the skin beneath the cuticle in the process of tattooing, and is an additional proof of the identity of the two structures. The discoloration of the skin by the internal use of nitrate of silver, is another instance of the disposition of the

surface of the tegumentary membranes to entangle and permanently detain colouring matters.

The injury above noticed is not the only one which follows the use of this remedy; the effects of its application to ulcers of the cornea is still more to be dreaded. When applied to such ulcers, either in solution or substance, it either adheres to or becomes entangled in the flocculent surface, and if this surface be not a slough and completely cast off, the nitrate of silver, rendered black or brown by exposure, becomes permanently fixed as the ulcer heals, and constitutes an indelible dark speck. Practitioners, who have been in the habit of using the nitrate of silver freely, will probably doubt that the effects which I have stated are to be apprehended, but I am satisfied, from repeated observation, that what I state is correct. I do not, however, mean to say that these effects necessarily follow in every case, but I believe the black opacity of the cornea is produced most frequently by the use of the remedy, in the very cases in which the application is particularly recommended, that is, in sloughy ulcers, or ulcers which have just cast off a slough. I entertain no apprehensions that by diminishing the confidence of practitioners in this popular remedy, surgery will sustain any serious loss. I feel greatly inclined to agree with the observation of Mr. Lawrence, "that he does not see how lunar caustic, which has been so much recommended, is to act upon the diseased eye beneficially." That the nitrate of silver may often have been beneficial in the hands of such a man as Scarpa, I believe, but I think that if that able surgeon had seen its general effects in the hands of others, he would not have given so unqualified a recommendation of it. To those, however, who may feel inclined to use the remedy, I have the following recommendation to offer. The surgeon, in place of using a pencil of caustic, as recommended by Scarpa, should scrape a little into fine powder, and then taking up a particle on the moistened point of a fine camel hair pencil, apply it with a steady hand to the ulcer, waiting his opportunity until the eye becomes fixed, and repeating the application until the surface of the ulcer becomes completely white and decomposed: he must, at the same time, take the greatest care to prevent the lid from falling, or the eye from

* Dublin Hospital Reports, Vol. V.

turning up beneath it, until he has washed the surface with a plentiful discharge of water from a finely pointed syringe.

The injury produced by the nitrate of silver is seldom so great as that which more frequently follows the use of the acetate of lead; yet I do not find any mention of the latter in books. If a solution of acetate of lead be applied to the eye when the cornea is suffering from an ulcer of a particular character, the acetate is decomposed, and a white precipitate is deposited on the ulcer, to which it adheres tenaciously, and in the healing becomes permanently and indelibly embedded in the structure of the cornea. The appearance produced by this cause cannot be mistaken; its chalky impervious opacity distinguishes it from the pearly semi-transparent structure of even the densest opacity produced by common ulceration. The degree and form of the opacity is varied as the original ulceration was varied. If the original ulcer was deep and circumscribed, the opacity is chalky, white, dense, and defined. If the original ulceration was superficial and diffused, or composed of numerous small specks of ulceration scattered over the cornea, the opacity presents the appearance of several irregularly shaped dots or specks of a dirty white appearance. If the ulceration has been attended by a prolapse of the iris, the peculiar opacity forms a complete or partial margin round the place of the prolapse, the structure of the iris not entangling the precipitate as that of the cornea does. The opacity appears to be produced at once, and by a single application; I have seen it the day after a drop of the solution of lead had been put into the eye by mistake. An old woman laboured under purulent ophthalmia of about ten days' continuance, with extensive slough of the cornea; the slough of the cornea was so completely impregnated with the precipitate that it resembled a patch of wet chalk, and the deposit was made not only on that part but on the conjunctiva covering the eyeball and lining the under lid, the entire vascular surface being patched and dotted with white. Much of the deposited precipitate was cast off with the slough, and the greater part separated from the conjunctiva, but the eye still retains much of the original appearance. The adhesion of the precipitate to the conjunctiva of the lids is so intimate

that it can scarcely be removed by an instrument, but I do not think it is so permanent as the deposit on the cornea. I this day attempted to detach a patch of this description from the conjunctiva of the lower lid by means of a cataract needle, but without effect. I do not think that I can state positively the precise condition of the ulcer which causes this deposit, but it does not take place in all cases where the acetate of lead is used. I can, however, say that it occurs most frequently where sloughing and ulceration attends purulent or pustular ophthalmia, and when the ulcer presents a dirty white, unhealthy appearance.

The occurrence of stains of the conjunctiva, or cornea, from accidental injuries by coloured or metallic materials, proves that the effects just stated may take place. Every one must have seen the black specks on the conjunctiva of persons who had suffered from an explosion of gunpowder into the face; and I have more than once seen a permanent black spot or streak from the thrust of a burned stick into the eye. Smiths frequently, in forging or chiselling, have particles of iron implanted in the cornea, and if the fragment be removed at once, no stain remains, but if allowed to remain until the iron becomes oxydated, a brown speck is produced by the detention of the oxyd in the healing of the small ulcer produced by the injury. Whenever, therefore, I meet with a case in which the iron has been allowed to remain until it has produced this stained ulcer, I scrape the surface with the point of the needle after removing the foreign body. When a patient presents himself the day after the occurrence of this accident, the surgeon should examine the part carefully, to ascertain whether the foreign body has been removed, as he may otherwise be deceived by the brown oxyd adhering to the spot. I have seen small black specks in the cornea, which I could not trace to any of the causes above enumerated, but which were attributed to particles of coal driven into it by explosions in the fire.

How far the stains and opacities, to which I have alluded, admit of remedy, I cannot determine. I have already said that I tried acid solutions, and in the recent deposit of the salts of silver, lead, or iron, on an open ulcer, I have scraped the surface with the point of a

needle, and thus removed the foreign matter, but as this cannot always be practised with safety, and may cause a large opacity of a different character, its utility may be questioned.

On the Decomposition produced by dropping a Solution of Nitrate of Silver, or Acetate of Lead, into the Eye.

When a solution of nitrate of silver or acetate of lead is dropped into the eye, it immediately becomes turbid, and a white precipitate is deposited. On placing slips of litmus paper, reddened by acid, between the eyelids, the blue colour is immediately restored, proving the presence of an alkali in the tears: *this I find to be the case, not only in a state of health, but in every form and stage of conjunctival inflammation, in which I have had an opportunity of trying it.* I obtained a considerable quantity of the lead precipitate by placing the head in the horizontal position, and filling up between the lids with saturated solution of the acetate, and as soon as the decomposition took place receiving the fluid into a watch glass, and immediately throwing it into distilled water. I may remark, that I find this plan of holding the saturated solution of acetate of lead for some time in contact with the highly vascular conjunctiva which is so frequently a consequence of purulent ophthalmia, by far the most efficacious way of applying it. I collected a considerable quantity of the precipitate in this way, from different patients, and sent it to Dr. Apjohn for analysis, who has been good enough to send me the following memorandum of the result. "The supernatant fluid having been removed by a sucking tube, the precipitate was digested with moderately strong acetic acid, which effected its partial solution with considerable effervescence. The solution having been decanted, the residual matter was well washed with distilled water, and then treated with a few drops of strong nitric acid; this caused it to disappear, nitric oxide being at the same time evolved, and the solution, when evaporated to dryness, yielded a residuum of a deep yellow colour, entirely destructible by heat. The insoluble matter was therefore of an animal nature. The solution made by the means of the acetic acid was next evaporated to dryness, and the saline residuum repeatedly digested with alcohol,

which took up the greater part of it, and was found upon examination to contain acetate of lead. The portion which resisted the solvent action of the alcohol appeared to undergo a slight diminution by digestion with distilled water, and the solution was rendered cloudy by nitrate of silver. This argues the existence of chloride of lead. Finally, what remained after the action of the water exhibited before the blow-pipe, the properties of phosphate of lead. The precipitate therefore thrown down from tears by acetate of lead, may be concluded to consist of a small quantity of animal matter, probably associated with some oxide of lead, of a considerable quantity of carbonate of lead, and of traces of the phosphate and chloride of the same metal. In conclusion I may observe, that the copious effervescence which occurred upon subjecting the precipitate to the action of the acetic acid, would appear to justify the conclusion that the free alkali of tears is present in the form of carbonate of soda, not of caustic soda, as is usually taught on the authority of Fourcroy."


Improvement in Spectacle Frames.

When short-sighted persons first put on glasses they frequently complain of head ache, dizziness, heat of the eyes, and other inconvenience; and those who have worn them for a length of time often allow them to become so badly adjusted, from wearing of joints or original bad construction, that the sight, in process of time, suffers material injury. I would advise any person who is obliged to wear glasses to acquire some little knowledge of optics, and especially the property of lenses; it will at least shew him that the adaptation of glasses to the eye is founded on certain unerring principles, and save him from the disgrace to which hundreds in this city are at this moment subjected by listening to the absurdities of itinerant venders of spectacles respecting their preservers, new inventions, the *cooling* effect of their glasses, and much other trumpery of the same kind. A short-sighted person should select the number of concave glass which affords him most perfect vision, and this requires much care and repeated trials of different glasses directed to the same objects. The glass should be so large that when he looks through the centre the frames shall not interfere with his vision, and

the pupil of the eye should exactly correspond to the centre of the glass. Dr. Kitchiner observes, at page 119 of his book of the *Economy of the Eyes*, "to give more assistance to the sight to see a distant object, many persons hold a concave eye-glass very obliquely to the eye, in which position a concave, number 3, will give almost the same sharpness of outline to objects as $3\frac{1}{2}$ when held parallel to the eye." I have observed the same in using a pair of glasses; when placed parallel to the eye the vision is not so good, and the effect is much less agreeable than when the glasses are inclined. The inclination should also be adjusted to the natural position of the head; in walking, the glasses should perhaps be parallel to the eyes, because the eyes are so frequently directed to objects directly opposite, or a little above them; and in reading or writing at a desk they should be inclined, so as to bring the glass parallel with the book or paper. We may often see a short-sighted person moving along the streets with his face ridiculously elevated, or when reading, with his chin brought down to the chest, from not having his glasses properly adjusted.

The means by which this adjustment may be effected is very simple. Common spectacle frames are provided with double folding side pieces jointed to the eye-frame by common knuckle joints, and the two folding side pieces are generally jointed to each other by a lapping riveted joint, but sometimes by a knuckle joint. To obtain the power of adjustment or inclination of the glasses, which I have stated to be so desirable, I have a second joint worked in the side piece as near as possible to the knuckle joint which unites it to the eye-frame. This joint should, of course, be the same as that usually made between the two limbs of the side piece—that is, the lapping riveted joint which allows the second piece to turn on its rivet over the first. Such a frame will therefore consist of the following pieces: an eye-frame holding the glasses, and jointed by the usual knuckle joint to a small side piece not more than a quarter of an inch long, which is again jointed to a second limb of the usual length of two or three inches, united by either the rivet or knee-joint to the last piece, which extends to the back of the head, and is looped at the end to take a ribbon, if the wearer should wish to tie

his glasses on. When the glasses are put on, the wearer, taking the eye-frame between the finger and thumb of each hand, inclines the glasses up or down until he finds the position in which the vision is most comfortable and perfect, and the tightness of the rivet in the first or short joint will maintain the inclination thus given.

I have found the attachment of glasses, by the frames grasping the head by their elasticity and form, so precarious and uncomfortable that I always tie mine on; but as it is necessary to raise them repeatedly to the forehead, they must be made to hold loosely, or what is much preferable, the string must be elastic. An elastic connexion, to go between the side pieces, may be obtained by bending a few inches of silver wire in a succession of half circles, thus , and hooking it into loops. My own spectacles consist of an eye-frame jointed to the short limb as above described, and this again to a single side piece three inches long, not thicker than strong pin-wire, with a small hole drilled through the end to admit the elastic wire. Such a frame rests lightly in the hollow above the nose, scarcely touches the temples, and is elevated or depressed with the greatest ease.

ACADEMY OF SCIENCE, PARIS.

Memoir on the Acupuncture of Arteries in the treatment of Aneurism, by M. Velpeau.

Read December 28, 1880.

THE greater number of important discoveries in the arts and sciences have been owing rather to chance than inference, or at least it is in conducting investigations for some other purpose that discoverers have arrived at the ends they have attained.

In April 1822 M. Velpeau wished to repeat before his pupils some experiments on acupuncture, which he had seen performed at Tours by M. Bretonneau in 1818:—A dog of middle stature was brought to the amphitheatre with the intention of passing long needles through the heart, the large arteries, and principal viscera: one of these was left in the thigh for twenty-four

hours, the artery being transfixed. The animal escaped, and the experimentalist supposed that he would necessarily perish; but two of the pupils, who had found the dog, brought him back four days after perfectly well. The needle, which had been placed there, being no longer to be found in the limb, M. Velpeau laid bare the artery to ascertain whether the artery had really been transfixed, and if the puncture had left any trace. As the vessel was partially torn, M. Velpeau first inquired why there had been no hæmorrhage; he soon saw that a very firm concretion of fibrine filled it up entirely, for the space of an inch. Nevertheless, he drew no inference from the fact, and he had entirely lost sight of it, when, in the month of November 1828, an accidental circumstance recalled it to his recollection. Whilst he was separating the femoral artery from the vein in a dog, and just as he was pushing it aside with a pin, some one came in, so that he was obliged for the moment to discontinue the operation. A sudden movement of the animal forced the pin through the artery into the limb. It remained there five days, when, on taking it out, and examining the parts carefully, M. Velpeau ascertained that an obliteration of the vessel had been the result in this case, as in the preceding. The fact now arrested his attention, and on reflection he thought he could explain it thus: if it be true, thought he, that it is sufficient to keep a ligature for an hour or two on large vessels in order to produce their obliteration, as Messrs. Travers, Hutchison, and others assert, it ought likewise to be possible to arrive at the same end by exciting at a given point of these vessels a morbid action capable of impeding the progress of the blood, and leading to its coagulation.

Always impressed with the idea that the contractions of the heart have less influence on the motion of the blood than is generally imagined, M. Velpeau was led to understand how a foreign body, even although very small, placed so as to remain transversely across a vessel, or even so as to make some projection in relief in its interior, is capable of producing the same effect as a ligature. Confirmed in these ideas by the instances of spontaneous obliteration of the large arteries quoted by authors, M. Velpeau commenced some experi-

ments for the purpose of determining the point.

An acupuncture needle, an inch and a half in length, was introduced in the course of the artery in the thigh of a dog without previous dissection; two other needles were also placed on the opposite side. On examining these parts on the fourth day, he found the first needle on the exterior third of the artery, which, however, was not shut up more than one half: of the other two, one was altogether without the vessel, which was obliterated by a solid clot about the length of an inch, in the midst of which the second needle was situated.

These experiments, continued M. Velpeau, were renewed in the following November, and then again in February 1830; they were repeated in the course of last April by M. Nivert, at that time the assistant in my course of operations. I also submitted them to new proofs very recently in La Pitié, on a dog, in which I likewise transfixed the aorta with two pins, but which died at the end of 24 hours of peritonitis, and the result has always been the same. To be more sure of not missing the artery, I always took the precaution, in the later trials, of exposing it. Sometimes I only used one needle, sometimes I employed two or three, according as the vessel on which I operated was of greater or less magnitude. Every time that the needle maintained its place for at least three days, a solid clot was found at the site of the puncture, and the obliteration of the canal of the vessel was the consequence. The aorta, however, when thus treated, did not undergo any change: but as the needles did not remain there more than something above twenty hours, I do not regard it as just to draw any conclusions therefrom.

It is proper to add besides, that up to the present time my experiments have all been made on dogs of small stature, and that the femoral artery is the largest vessel I have transfixed. It is enough to say that, before drawing conclusions, or applying these principles to the human subject, it would be necessary to renew the experiments, and to try them on larger animals—as horses, for example. A single pin or needle has appeared to be sufficient for a vessel not exceeding in size a writing quill; two or three would be necessary for vessels half as large again; and

there would be nothing to prevent the application of four or five for the larger arteries. When several are inserted, it is necessary to place them at four or six lines from one another, and in a zigzag form rather than straight.

M. Velpeau next proceeded to speak of the cases in which this method might be advantageously applied. If, as however the author scarcely ventures to hope, the coagulation produced by the presence of the needle should effect a consolidation in the human subject sufficiently strong to render the vessel permanently impermeable, the results would be of immense importance. In place of incurring the risk of wounding nerves and veins, and making a considerable and minute dissection, it would only be requisite to expose one surface of the artery at the smallest possible point: nay, perhaps it might be possible to cure the most formidable aneurisms, as those of the ham or thigh, without dividing the skin, by merely transfixing the artery with a fine needle at the groin. It is suggested as possible, that even aneurisms of the external iliac, or of the aorta, might thus be cured. By fixing a thread in the needle, it might be taken out at any time when this was deemed necessary.

Arteries have been transfixed by different surgeons by means of needles, but principally with a view of giving imaginary security to ligatures: we are not aware, however, of this proceeding having been previously adopted on the same principle as that now advocated by M. Velpeau.

CHOLERA.

[THE following case has been published in a French journal as one of cholera—a circumstance calculated to excite some alarm at the present moment. There is nothing whatever in it which is not perfectly intelligible, on the supposition of the individual having taken something which disagreed violently with his stomach—acting, in fact, as a poison.].

M. Geoffroy, aged 30, residing in the Rue du Petit Sanguard, of bilious temperament, tall, and generally having good health, experi-

enced, at six in the morning of December 11th, a slight uneasiness, accompanied by some colic; this indisposition, however, was not sufficient to prevent him from going to the place of his usual avocations, where he had scarcely arrived when he fainted two or three times, and had numerous copious evacuations both by stool and vomiting. Each time that he recovered his consciousness he complained of tightness at the chest and violent colic, accompanied by severe cramp and excessive coldness of the legs. A glass of wormwood, warm wine, and sugared water, were successively presented to him, all of which, however, he rejected. Having been carried home, M. Colombel, by whom the case is related, was sent for, and who remarked the following symptoms:—The skin was shrivelled, and of a bluish colour, as is seen in those who die of asphyxia, from sulphuretted hydrogen or carbonic acid gas. The pulse was from 36 to 40, and sufficiently strong, sometimes stopping and then resuming its action again. He had had between 70 and 80 motions, since the invasion of the disease, of clear, yellowish green, liquid matters; and about 60 attacks of vomiting; with spasm, and violent constriction about the præcordia, violent cramps of the limbs, heat of the belly, very great coldness of the limbs. He also complained of ringing in the ears, and of having nearly lost the power of seeing and hearing.

M. Colombel commenced his operations by abstracting four palets of blood, during which proceeding the patient had several attacks of vomiting. The blood was black and thick, flowing with difficulty and drop by drop from a large opening in the vein during the periods that the patient was conscious, and ceasing entirely to flow during the fits of syncope. At length, however, it flowed in a jet, and in sufficient quantity. Scarcely was the bleeding completed when the symptoms ceased as if by enchantment. Warm cataplasms were applied to the lower extremities, and bottles of hot water to the chest and arms; and a mixture, containing sulphuric ether, musk, and castor, administered every quarter of an hour, while a grain of opium, with some assafoetida, were thrown into the rectum in a clyster.

In the evening he was so much better

as to wish to get up. Next day he continued to improve, and had only four evacuations: the medicines were repeated. On the following day two grains of opium were added to the mixture, on account of slight return of the purging. From this time he continued free from complaint.

ANALYSES & NOTICES OF BOOKS.

“ L'Auteur se tue à allonger ce que le lecteur se tue à abrégier.”—D'ALEMBERT.

Observations on Mental Derangement : being an Application of the Principles of Phrenology to the Elucidation of the Causes, Symptoms, Nature, and Treatment of Insanity. By ANDREW COMBE, M.D.

WHEN Dr. Combe says that the doctrines of phrenology are making progress, and—while he admits that less is now heard of them, and that they seem to be hastening to the oblivion assigned them by more than one eminent critic—asserts that all this is because people are become more reconciled to those doctrines, and “now, instead of making them the subject of idle gossip and table-talk, rarely mention them except with the seriousness due to rational science,”—when he says all this, we fancy he deceives himself, and is but poorly borne out by facts. That phrenology is less startled at, and that people are become, from incessant dinning of their ears with its language and pretensions, habituated, or, if you please, “reconciled,” to it, so far as to become almost perfectly indifferent to the subject, we most readily admit; but if we also admit that they entertain it, when they do, with “seriousness,” we will not, cannot, allow, that it is with the seriousness due to rational science, but with the sobriety which succeeds the excitement of a game at romps. The *sensation* is worn out—it is no longer the amusing theme of the convivial board—it is universally voted a bore, in short—and the efforts of its fallen advocates to bring it forward, when they fancy they can attempt it with safety, are generally scouted and

treated as a downright nuisance. Let not Dr. Combe flatter himself longer—let him look impartially at the actual state of things, and he will see that the day of phrenology—if it ever had a day for any other purpose than for the merriment it afforded—is gone by, that its glory is departed, and that the benevolent purpose of the public, if not provoked from their good intentions, is—to let the departed rest in peace!

The symptoms of provocation, however, we lament to say, are but too palpable: those to which we allude are to be observed in the pamphlets and periodical *brochures* which issued pretty thickly from the press, as thickly, at least, as tracts on a “new light” in another field; and, not content with endeavouring to make good their pretensions, and to demonstrate their principles to be correct, they boldly make postulates of them at once, and set off full speed to clear up all mysteries relating to both mind and matter. In the present instance we have the *philosophy* of insanity—as one of the sect, no doubt, would call it—laid down with an affectation of that “steady certainty” which is so “characteristic of truth.”

Insanity—that much agitated theme—that bewildering topic to so many theorists—which has been debated and decided on by each succeeding inquirer according to his peculiar views—metaphysical, material, nosological, theological, practical; rational, sceptical, or nonsensical—is here treated at large upon *phrenological* principles. This is evidently a bold, though not a novel, proceeding, and the Doctor anticipates the objections that may still be made to it. To the question, “Is it not premature to seek to apply the principles of phrenology to the improvement of medicine, seeing that so much is wanting to fill up its details?” he thus replies:—

“False theories are now prevalent, which necessarily mislead and divert attention from the proper investigation of the subject, and beget confusion and uncertainty of practice; and, therefore, even if phrenology only approximate more nearly to the truth than they, the assistance which it will afford must be proportionally more valuable; and, therefore, *its leading principles, being already established* on an irresistible induction of facts, we are authorised, by reason and analogy, to make use of

them, so far as they are applicable, as freely and authoritatively as we do of the general principles of chemical and natural science, neither of which has yet attained any thing like the perfection which time and cultivation will one day bring along with them."

The "if," in this paragraph, is a pretty modest mode of putting a postulate or a dogma; and the assumption, in the succeeding clause, is very plausibly and coolly insinuated: but we have long since learned to be on our guard, and again and again have we cautioned our readers against the gratuitous assumptions of this once amusing creed. Caution, indeed, it would seem, is now more necessary than ever; for the *adepts*, as their numbers are more limited, are grown apparently so much the more desperately confident, and the books which issue from the press, tinged with phrenologic notions, with the greatest nonchalance assume far more than has ever been proved, and build up airy fabrics of imposing showiness—well calculated to fascinate the simple hearted—upon shifty foundations, which are carefully concealed from view. We have never been, nor are we likely now to be, of the number of those who attach so much importance to the doctrines of phrenology as to deem them worthy of serious confutation—they sufficiently expose themselves, or require but little tact in the unprejudiced observer to detect their weakness and absurdity. Time has done and will continue to do much towards the overthrow of the "vain philosophy" in question: we cannot say it is very mischievous; so to time we willingly depute the business of its extinction; its mortality, we foresee, will be shortly manifested like that of a lighted candle end.

It is needless, we think, upon second thought, to say more about the *progress* of this creed, or system, as it is sometimes facetiously called. Its peculiar circumstances have been often and ably exposed, and the hedge-fighting warfare of its supporters unmasked. "Notwithstanding," as it has been well observed, "they have been dislodged from every position they have taken up, the fugitives are apt to collect again their scattered forces, and to fire a few shots whenever an opportunity is afforded, such as the hanging of some remarkable criminal, the death of some

celebrated person, or a case of monomania, when they may chance to procure a cast of the head, and discover such protuberances as answer their eager expectations." Of this last "opportunity" the book before us abounds with specimens; but before we trouble our readers with a few of them—from which a judgment of the whole may be formed, we shall take leave briefly to note one or two other particulars in the conduct and mode of argument pursued by phrenologists. And the first of these is the surprising industry and ability with which they avail themselves, *quocunque modo*, of the concessions or contradictions of their opponents. Of this we have a sample in the following attack on Mr. Bell, with which the author closes his introduction.

"What a contrast between the philosophic candour of such sentiments," (some of Dr. Conolly's, from his work on Insanity, just quoted), "and the unworthy criticism of another justly celebrated professor of the same university, who, in his late work on the Nervous System (p. 222), is pleased to affirm, that 'the most extravagant departure from all the legitimate modes of reasoning, although still under the colour of anatomical observation, is the system of Dr. Gall.' And yet so irresistible is the force of truth to unprejudiced minds, that notwithstanding the weight of the professor's well-earned reputation, and the natural influence exercised by a talented teacher over the minds of his pupils, in enforcing his own opinions, and retarding the progress of those which he combats, he has actually to complain of the 'popularity' of the phrenological doctrines, and of the difficulty he has felt, 'during their successive importations, to keep his pupils to the examples of our own great countrymen,' and to the completion of the structure, 'commenced on the labours of the Monros and Hunters, and which the undeserved popularity of the continental system has interrupted.' The unprejudiced inquirer will probably discover another reason for the difficulty the professor experiences in preserving his pupils from the contamination of phrenology, and be disposed to believe that, in a contest for truth, no man, however great his talents, or extensive his acquirements, has any chance for success when nature is arrayed against him."

We shall only say in reply to this tirade, that if the reader do refer to the work on the Nervous System—or to our penultimate No. of the Gazette, he will find the *whole* passage here alluded to, and will be enabled to judge whether the garbled extracts given by Dr. Combe justify the latter in imputing *unworthy* criticism to Mr. Bell.

Another characteristic of the phrenological fraternity is the unscrupulous arrogation of all merit to themselves, and the unblushing ascription of all merit to the Castor and Pollux—the great northern lights of their hemisphere—the Drs. Gall and Spurzheim. Gall and Spurzheim and ourselves are all in all. *Par exemple* :—

“It is now generally acknowledged, that the three nerves of the tongue subserve taste, motion, and touch; and the difficulty is not greater in regard to the brain, than it is in regard to them, or to the spinal nerves; for it was inability to distinguish any boundary between their constituent parts that alone prevented their separate functions being sooner demonstrated. But the reasons which led to their being viewed as compound, existed in all their force long before the fact was ascertained, and were felt by many, and by none more than Dr. Spurzheim, to be as conclusive then, as they are proved to be now, that is universally acknowledged.

“I cannot refrain from mentioning here, in justice to Dr. Spurzheim, that, on the strength of this kind of evidence, which his logical mind felt to be irrefragable, he advanced, years before the publication of Mr. Bell’s discoveries, very nearly the same doctrine in regard to the functions of the nerves, which Mr. Bell,” &c.

Many similar passages meet our eye as we revolve page after page: but we must not waste our space in dwelling on such a theme; a short analysis of the contents of the volume may be more gratifying to the reader.

It appears, from what we are told in the introduction, that the manuscript pages of the work were employed last year, by Mr. Geo. Combe, in lecturing the pupils and visitors of the class-room of Dr. Mackintosh, in Edinburgh. Of course “a degree of interest was excited in the audience strongly indicative of their sense of the inherent soundness and practical value” of the matter. “Indeed the anxiety expressed on the

occasion to obtain, in a more permanent form, the views then unfolded, had no small share in inducing” Dr. C. “to venture on the present publication.”

We are bound to say that the work is arranged with great order and precision. The subject is discussed in ten chapters; chapter 1 containing general remarks on the functions of the brain and nervous system. 2, Influence of organic size on energy of function, particularly as applied to the organs of the external senses. 3, Mental derangement is always symptomatic of cerebral disease. 4, Predisposing causes of mental derangement. 5, Exciting, or occasional causes of mental derangement. 6, Symptoms of mental derangement. 7, Duration, periodicity, and symptomatic forms of mental derangement. 8, Appearances on dissection after mental derangement. 9, What are the proximate causes of mental derangement? 10, Prevention and treatment of mental derangement.

As we love to be practical and are professed utilitarians, we have no hesitation in choosing an extract from the chapter on the prevention and treatment which Dr. Combe recommends; but we shall previously give a passage in which the various attempts to lay down a definition of insanity is very well exposed.

“Numerous definitions of insanity have been given, but never one which has been considered as satisfactory either by the profession or by philosophers. Dr. Spurzheim comes nearer to the mark than most of his predecessors, when he announces his expectation that the day will soon come, when derangement of the intellect and feelings, and cerebral affections, will be placed in the same order of diseases, and *we shall speak only of affections of the brain*, as we do already in regard to the disordered functions of the five senses, which we always refer to their respective organs. But, in his *professed* definition, even he is far from being successful, as it rather repeats a truism than conveys any precise information. It is important to remark this fact, because definitions are constantly sought after, in civil and in criminal cases, by lawyers and by judges, and the whole value of a witness’s evidence is often made to turn on its relation to a standard, which is in itself the merest assumption, seeing that it is beyond the power of man

to invent any brief description, which shall comprehend the various cerebral affections whence insanity originates. Dr. Spurzheim states it to be the 'derangement of a sensation, or of an intellectual operation in an individual, who is not capable of distinguishing that diseased state; or the aberration of any sentiment in an individual, who cannot distinguish that aberration, or who has no control over the actions to which it impels him; or, in other words, it is the state of a man who is incapable of distinguishing the derangement of his mental operations, or who acts irresistibly.'

"On the old system of looking exclusively at the mental symptoms to the neglect of their pathological origin, this definition may seem, and in reality is better, than many others. In announcing that insanity is the derangement of a sensation, or of an intellectual operation, in an individual who is not capable of distinguishing that diseased state, Dr. Spurzheim seems, indeed, as if he took it for granted, that those who are of sound mind know intuitively all the conditions constituting mental health, and discern intuitively all aberrations from them; an extent of knowledge and discernment not possessed in regard to any organ of the body, and impossible to be obtained in regard to the organ of the mind, in respect that it is at once the instrument of judging, and the subject to be judged of; but in reality he entertains no such notion, and it is not from any fault of his, but from the nature of the question itself, that he has fallen into this apparent error. It is also worthy of remark, that some lunatics are aware of their condition, and yet do not act irresistibly in the sense alluded to by Dr. Spurzheim, which applies, as I understand it, only to those whom no external motive, save force, can restrain. The very attempt, indeed, to frame *one* definition inclusive of *all* the organic affections which produce insanity, and that definition made with a reference not to the pathological states, but to the mental symptoms only, is so inconsistent with the principles first so ably advocated by Dr. Spurzheim, as to lead to the belief that it had been made more from deference to the usages of other authors, than in obedience to the dictates of his own sounder judgment."

We really cannot see any thing very

original in the practical chapter: however, we should, perhaps, deceive the expectation of the reader were we not to quote at least one passage from it.

"I have seldom had occasion to see or recommend general blood-letting in pure insanity; but I have observed more decided benefit from repeated and free local blood-letting than from any other means, and therefore consider it, taken in conjunction with a suitable regimen, and the use of other auxiliaries, as an extremely valuable remedy in the particular class of cases to which it is adapted, viz. those of vascular excitement. But, as Cox justly remarks, as fury, violence, and rage, may equally characterize an opposite description of cases, and the pulse afford us little information, we must be careful to seek for other than mental signs to guide our judgment. It is, indeed, often very difficult to draw a true line of distinction between them, and then we must be equally cautious in our practice. But when we see manifest symptoms of general plethora in young, robust, and sanguine subjects, or in females at a critical period, or in those who have lived fully and taken little exercise, or had some customary discharge suppressed, or, in short, been exposed to some cause productive of fulness, if we do not resort to depletion and evacuations, we not only diminish the chance of recovery, but leave the patient exposed to the risk of apoplexy, or organic and incurable disease. In the various public institutions for the insane, blood-letting, local or general, is now much more employed than it was some years ago, and with a marked increase in the number of cures. In the Lancaster Asylum, Mr. Davidson has found it very beneficial.

"Dr. Burrows condemns general bleeding, which, as has often been remarked, is not well borne by maniacs; and therefore his testimony in favour of the local abstraction of blood is the more to be relied on. And he declares that he cannot recollect a *single recent case* (and this, be it observed, embraces every kind of madness), in which the abstraction of blood, either from the head or neighbouring parts, has not been distinctly indicated; and he repeats it without hesitation, so long as fresh excitement continues, even though it should become necessary to give tonics at the same time. This practice

cannot be far wrong, when Dr. Burrows cures *nine* out of *ten* by its adoption. When any of the natural evacuations are suppressed, the French physicians are much in the habit of directing applications of leeches to be made as near to the part concerned as possible, and they say with the best effects.

"In the same description of cases, cold applications to the shaved head are of primary importance. Laxatives, mild diet, quiet, seclusion, and absence from stimuli, such as too much light, intercourse with friends, and all other causes of excitement of mind or body, are all highly useful; and the activity with which they are to be followed out must depend on the intensity of the disease. But *consistency* in the selection of remedies, and due perseverance in the plan laid down, are absolutely essential; and, therefore, blisters, opium, and irritants of every kind, ought to be avoided, till the vascular action be reduced. Esquirol recommends laxatives to be given one day, and the warm bath the next, and says that he has found this method very successful in relaxing the skin and soothing excitement. He thinks a full dose desirable, and used to state in his lectures, that he found mild saline laxatives answer best in sanguine temperaments, and those of a warm and aromatic kind in lymphatic constitutions, and laxatives, combined with antispasmodics, in nervous temperaments. After fourteen or fifteen days' perseverance, Esquirol recommends an interval of eight or ten days to be made before resuming the same measures. When drastics are used, he advises abundance of nourishment to be given. When a dry state of the skin, restlessness, and violence are present, the same author says that great benefit will be derived from the warm bath, taking care that it be not made too hot. In the Salpêtrière he orders it to be continued about two hours, and sometimes so long as eight hours daily, and never finds it induce debility when forty-eight hours are allowed to elapse before its repetition. Cold applications to the head, while the patient is in the bath, are considered useful. In his practice, the cold bathing is rarely resorted to in any form.

"I have never seen the warm bath carried to the same extent elsewhere, and therefore cannot offer an opinion of its propriety or safety; but I have wit-

nessed its good effects, after due depletion, so often on a more limited scale, that I consider it a remedy of great power, and it is now pretty much employed in our public asylums; so that, before long, we may expect to be in possession of fixed rules for guiding us with more precision to the states in which it is applicable. As a preventive, and in procuring sleep, where narcotics cannot be given, it is very valuable. Mr. Davidson informed me, that in the Lancaster Asylum, a bath at 85 deg. was used twice a week, as a means of cleanliness, for all the patients indiscriminately, and with excellent effect: and that, as a remedial agent, the cold or tepid shower-bath was in common use, after local depletion, apparently in the description of cases we are now considering, and that its effects in diminishing increased action, reducing heat and restlessness, and soothing the patient, were very marked, and unattended by any bad consequences, either of reaction or any thing else. From its utility and safety in such circumstances, it is repeated wherever the indications reappear, occasionally so often as three or four times in twenty-four hours."

These extracts have filled up a much larger space than we had intended to devote to them; so we must even close our notice of the volume abruptly. We *may* recur to it again, at greater leisure, and when we are more phrenologically disposed; but at present we shall merely repeat, that the book, however well written and well constructed, has one essential feature that lowers it prodigiously in our estimation,—it is based on fanciful and untenable principles, and, as we said before, to our eyes, by consequence, only presents one more specimen of the fruits of a "vain philosophy."

MEDICAL GAZETTE.

Saturday, January 15, 1831.

"*Facet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso.*"—CICERO.

MEDICAL AGITATION IN IRELAND.

A LETTER—a coarse, disgusting letter—signed A. J. (*i. e.* Arthur Jacob) one

of the professors in the school connected with the College of Surgeons in Ireland, has been published in a very recent number of our immaculate coteremporary. The object of the letter-writer is apparently three-fold: first, to throw mud in return for mud, which he says has been thrown at him—alluding to some dirty doings which have been going on of late; secondly, to defend the charter and constitution of the College to which he belongs—and that, by a curious *ad hominem* argument which cannot fail of success, put as it is to the worthy editor to whom the appeal is made, viz. that the said charter and constitution are founded on the principle of “universal suffrage, annual parliaments, and vote by ballot”—a precious constitution by his own shewing; and finally, to have an opportunity of winding up his “egregious suggestions” and “pathetic exhortations,” (what can the man mean by these silly phrases?) by calling the members of his college—“*a parcel of unprincipled scoundrels!*”

This is what we call “agitation;” it is a palpable disturbance of the social compact which ought to subsist in the medical republic; and it is analogous to the political conduct of certain misnamed patriots, who for their own ends contrive to set the country in a blaze. In Ireland the analogy is particularly strong—the medical and political agitators are all alike, differing in but one point—a point, to be sure, of no small importance: the politicians are busy in endeavouring to effect a repeal of the union; whilst the medical agitators happen to have no union to repeal; and this is the very thing we wish to speak about.

We believe the conclusion is unavoidable—that there is something in the character of the people of the sister country which renders them peculiarly susceptible of new impressions—that they must always have some new excite-

ment to amuse them; and that the faculty among them are by no means exempt from the national peculiarity—be it for their good or their evil report. Various communications have from time to time reached us from Irish correspondents, complaining of this want of union, and absence of cordial amity in the members of the medical profession in Dublin—detailing too, with unpleasant minuteness, which savoured strongly of truth, the natural consequences affecting the interests of the school,—but we were unwilling to give currency to the reports—and we suppressed them. The veil, however, has now been fully removed by one who should have some weight attached to his character by reason of the situation which he holds in the Dublin school—a professor in the College of Surgeons—who enters the arena—the ring, rather, as the language he uses would imply—flings down his gauntlet, announcing his name, quality, and pretensions—challenging to a contest with him all who may choose to enter the lists—and calling aloud, in appropriate phraseology, for “a fair field and no favour.” When this disgraceful scene is enacted publicly—to the great scandal of all right-minded observers, and to the great injury of persons immediately concerned, we deem it our duty to retain our scruples no longer, but to deal with all parties in that spirit of candour and impartiality which has marked our conduct as public journalists since the very commencement of our career.

That a bad feeling subsists among the medical teachers of Dublin, and that the Dublin school is not free from those dissensions which have so disgracefully signalized other quarters, are put beyond a doubt by this letter of Dr. Jacob—a letter which engages our notice for more than one reason. The document itself suggests to us its writer, and he, the different places which he has occu-

pied since his first entrance, with whatever notoriety, upon public life.

Though now an agitator of the first order in the medical world, of the Irish metropolis—a very Daniel O’Connell in his way—his first appearance in the field of his present operations was humble enough. He has, in fact, gone through a regular course of insect transformation; his *larva* state being spent in the dissecting theatre of the School of Physic—his *pupa* in a rival establishment of his own architecture, a place-of-all-work preparatory to his next change—and he is now to be seen in his *imago*, or perfect state, in a professor’s chair in the School of Surgery. We beg leave to disclaim all intention of sketching the personal and professional character of Dr. Jacob—that will be found already done by a faithful but no friendly hand, in a back volume of the *Lancet*—the very publication to which he now flies for refuge and protection—

“The beaten spaniel’s fondness not so strange!”

—but we mention those transformations simply because they carry our thoughts over scenes which we have had it in our minds for some time to review, and which we shall now most willingly attend to, invested as they are with a certain show of interest from the disclosures which have recently been made. In discussing, however, the causes and effects of the dissensions which disturb the repose of the faculty in Dublin, it will evidently be necessary to consider the latter in its threefold capacity, as it embraces a school of physie, a school of surgery, and a number of private establishments unconnected with either; and to offer some remarks upon the constitution of each, in the order here assigned to them. We shall then be the better enabled to take a comprehensive view of the actual state of all the par-

ties, considered as one body; and to point out with more precision who are the discontented, who the disaffected, and who the disturbers and agitators of that tranquillity which, in a place devoted to education, should be so solemnly preserved.

The School of Physic in Ireland is the result of a partnership; it is a joint or club concern between the University of Dublin and the executors of an individual who bequeathed some property for the endowment of one or two professors. The formation of a partnership for such a purpose is clearly not the most promising mode of proceeding: we should look upon such a commencement, between two parties so unequally matched, as peculiarly ominous; and events have shewn that such an impression were correct. Fifty years have not yet elapsed since the school was first formed, and perhaps no half century ever passed in a state of union more inharmoniously, or with a worse understanding between the contracting parties. Every successive year is productive of some new grievance—complaints and applications for redress are ever on the tapis. The interests of the partners, or at least of one of them, seem to be as much disjointed as the locality of the school: three of the chairs are in one place, and three in another; invidious distinctions are observed with regard to the respective professors—those belonging to the University being differently elected, more permanent in their places, and far better provided for than the others. In short, the University, while she consults the security and comfort of her own side of the union, is very censurably negligent in contributing to the well being or even the conveniences of her colleague. We know not how true it may be, but it is confidently said by those who have a right to be well informed on such matters, that the School of Physic is con-

templated with a novercal hatred by the heads of the University—that it is deemed an incubus—a clumsy, troublesome, and expensive incumbrance upon the fair proportions of Alma Mater. We can scarcely credit the assertion; yet, if it be well founded, we know not how to describe, in terms sufficiently pointed, the stupidity and folly of those *heads*. Is it credible that the University of Dublin is really forgetful of the obligations she owes to her medical graduates—the most accomplished, the most faithful, and the most widely diffused of all her alumni?—that while she educates her lawyers and her divines for her “home consumption,” her physicians are her staple commodity for her “export and foreign trade?”—and that she owes, not only no small share of her fair fame, but of her goodly revenues, to the existence of her medical school? But this only by the way. What we have just said of the origin of the school, and its divided and ill-assorted fundamental materials, sufficiently explains at least one of the causes of dissidence observable in the superstructure.

Nearly allied to this, and in some measure traceable to it, is another cause, which we would touch upon with all due delicacy. The professors of the double foundation, we hesitate not to say, are *excessively* remunerated; for the quantity of labour, physical and intellectual, which they have to undergo in the discharge of their duties, they are overpaid; and are thus rendered too independent for the display of ability in any great and voluntary undertaking. Were it not an invidious inquiry, bordering almost on personal allusion, we might be tempted to seek an answer to a quære or two relative to the printed works which have emanated from the Dublin chairs; but let it rest; want of leisure between the business of the school and the occupations of private practice, may have prevented the professors from

troubling much the press; yet this could hardly be the consequence if they were filled with a proper degree of emulation: emulation is, however, wanting for the reason just assigned.

That there should be abundant misconceptions abroad relative to the advantages and disadvantages of the school of physic in Ireland, is not at all to be wondered at, when the circumstances we have mentioned are taken into consideration. The characters—nay, the very names of most of the professors, are unknown on this side the channel. We shall only add upon this head, that where there is obscurity, there is at least want of energy—and want of energy in the managers of any branch of public education is scarcely to be redeemed by any quantity of sterling talent.

But what, if in addition to this want of energy and of emulation, there be also ascribed to the same body a want of union and mutual kindliness of feeling?—We are unwilling to pursue the topic further.

In what we have said with regard to the obscurity, or at least the want of notoriety of the Dublin professors, we would not be understood to include them all in one indiscriminating sentence. It will immediately occur to every man, who has heard any thing about the school in question during the last few years, to make one or two honourable exceptions to our general averment, and we cordially acquiesce in exempting the chairs of Anatomy and the Institutes from the severity of precipitate censure. To these, most assuredly, is due whatever character the school of physic in Dublin at this inoment possesses; and on them, we suspect, any immediate advances it may make, must altogether and entirely depend.

Our remarks on the school of surgery, and more particularly on the subject matter of Dr. Jacob's letter, we shall reserve for another number of the Gazette.

PARISIAN SURGICAL PRACTICE.

Operation for Strangulated Crural Hernia—Recovery.

[Communicated by M. le Docteur Forget.]

On the 25th of November last, I was called in by M. — a physician, residing at Puteaux, to operate for strangulated hernia on a country-woman, 57 years of age, of spare habit, and labouring under rupture for eight years, though without having ever worn a truss for it during that period. The tumor, about the size of a small egg, used to yield to simple pressure applied by the patient herself, until the 22d of November, when, without any previous symptom, slight colic was felt, and she found herself unable to reduce the swelling. The physician who was called in, tried the taxis, but with equally bad success: posture, baths, emollients, leeches, were all useless: the colicky affection was followed by hiccup; then vomitings ensued, first of alimentary and mucous, but presently of stercoraceous matter. The abdomen acquired excessive sensibility, and the pulse became hard and frequent; yet it was not till the third day that the patient consented to an operation.

When I saw her, I found in her left groin, adjacent to, and on a level with, the anterior commissure of the external labia, a hemispherical tumor, prominent, hard, and almost incompressible, though exquisitely sensible of pressure; the colour of the skin unaltered, save where the leeches had been applied. In ascertaining the boundaries of this tumor, I discovered below it a pedicle which extended beneath the crural arch. After making ready for the operation, I tried the taxis once more, with every exertion in my power, but without success; and I should have suspended the patient by the feet, but that she peremptorily refused to comply—fearing, as she said, the stoppage of her breath, to which she was habitually liable.

The patient being placed upon a bed, near a window, with a cushion under her to raise the pelvis, her thighs also being slightly sloped and her head raised, the skin that covered the tumor was gathered into a longitudinal fold, and a straight bistoury being plunged into it, a wound was made of about two inches in length and parallel to the folding of the groin. The incision was then

pursued more deeply, with due precaution; and a branch of the subcutaneous abdominal artery being divided, was tied in a moment. With a knife and forceps, or a grooved sound, the cellular layers were successively cut through, until the intestinal contraction was obtained. I was much struck with the isolated, brownish, arborised appearance of this part, and was inclined to look upon it as one of those species of hernias denominated *dry* (*sèches*). Having now ascertained the strangulated spot by means of the indicator, I slipped over it Cooper's bistoury till I reached the falciform fold (Gimbernat's ligament), beneath which I contrived to attach the button without much difficulty: then turning the cutting edge, I procured a dilatation of some lines. But as I pressed now upon the intestine, in order to reduce it, a certain resistance and the oozing of a small quantity of serum attracted my attention, and I immediately perceived the existence of an extremely diaphanous and delicate membrane applied closely to the intestine. I raised it with great caution, and slit it with a pair of scissors; the bistoury was then once more introduced between it and the intestine, and the contraction divided in the direction of the first enlargement. The protrusion then, which was formed by about three inches of the small gut, was gradually reduced, and, in a few seconds after, the gurgling of the tube was heard.

When I traced with my finger the interior contour of the ring, I detected some loops formed by the omentum, or the intestine itself: some of these I destroyed, but others of them that offered considerable resistance I thought it better to let alone.

Owing to an accident (not having taken with me any good sticking-plaster), I did not attempt union by the first intention: I dressed the wound with charpie and compresses. Ordered a vegetable ptisan, and a lavement. The lavement, however, was not administered, the patient passing the evening and the night in a tranquil and satisfactory manner.

On the next day very troublesome vomiting supervened, which rendered it imperative to remove the dressing, in order to see that no part of the intestine had relapsed into its former condition: all was found right, except

some of those loops above-mentioned, which it now seemed adviseable to obliterate altogether. Whether from the adoption of this resolution, or from whatever other cause, the vomiting no longer ensued. In the evening, however, alarming fits of colic supervened. Ordered a lavement composed of senna and Glauber's salt; which in two hours produced complete relief by the passing of copious stools.

The occurrence of violent pains in the epigastrium on the following day (the 27th), made the application of fifteen leeches necessary: they operated like an enchantment. Every thing went on well after this: the wound suppurred laudably, and cicatrised in due course.

Though the mistake that occurred in not immediately recognizing the existence of the delicate membrane above-mentioned only served to delay the operation for a moment, it may be useful as a warning to other operators to be on their guard. If the obliteration of the loops on the following day were not the immediate cause of the cessation of the vomiting, at least the coincidence of the two circumstances is deserving of notice; and, in fine, the copious stools which ensued upon the exhibition of the lavement, and the relief afforded by them, ought to be a strong encouragement to practitioners generally not to hesitate in the adoption of essential remedies.—*Lancette Française*.

MEDICO-BOTANICAL SOCIETY.

Hyosciamus and Taraxacum.

THE following memorandum, by Mr. Houlton, was lately read before the Medico-Botanical Society.

The severe and protracted cold of the last winter was very injurious to many of our more tender indigenous, biennial and perennial plants. The effect of the season upon two very important medicinal plants, the *hyosciamus niger* and the *leontodon taraxacum*, deserves notice; the plants of *hyosciamus* in my garden were all cut off by the frost, and but a very small quantity of the mature herb was brought into the market; forty-two shillings per hundred weight was given by the wholesale trade in Covent-Garden Market. I understood from different persons

connected with the trade, that it was not to be procured in sufficient quantity to meet the demand of the profession at any price. The consequence has been, the substitution of the immature plant; this I can state with confidence from my personal observation. When I had the honour to bring this plant before the notice of this scientific society, during the last session, I mentioned some facts which I considered important, and which I now beg leave to recapitulate, because they are not all, as far as my reading extends, to be found in books. Contrary to what is stated in most modern works on Botany and Materia Medica, *hyosciamus niger*, I assert, is a biennial plant, and is in a fit state for medical purposes in the second year only of its duration, when in flower, or according to the excellent general rule of the Royal College of Physicians, "*postquam flores expassi fuerint; et antequam semina maturescant.*" The leaves at this period differ very much from those of the first year: their season is generally from the beginning to the end of June; they are cauline, sessile, very clammy, and fœtid, containing a large proportion of extractive matter. The leaves of the first year are plentifully brought to market in August and September; they are radical, petiolated, having very little clamminess or fœtor, and containing considerably less extractive matter than those of the second year. The tincture from the mature leaves is a deep greenish brown, and not clear; the tincture from the first year's leaf is much paler and clearer; the difference in their relative strength is great.

The above observations may be very easily verified; their importance must be obvious when the value of the article of materia medica is considered, and the fact declared, that large quantities of the improper leaves are employed in this metropolis every year.

Leontodon Taraxacum suffered from the peculiarity of the season in a curious manner. I have already stated to this society and to the public, that the bruised roots of this plant in the month of August, yield by pressure, nearly a third of their weight of thick cream-coloured fluid, and that early in the spring they afford a less proportion of their brown liquid. This year, in the month of August, some roots which I had fresh dug up for me, contained but a very small

quantity of juice, and that destitute of the more important sensible properties usually found in it at that season; therefore the extract of the dandelion, prepared after my plan, cannot be obtained of this year's manufacture. It may be proper to state, we must not depend too much upon the herb-venders for these roots, as respects their proper season: for they are kept in sand with their herbaceous part removed; if they remain long in this state, they will not answer to the description I have given of them to this society*.

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

HOTEL DIEU.

Large Tumor growing from the side of the Thyroid Gland—Ligature of the Pedicle—Death in eighteen hours.—Cases in which fatal results have been produced by the entrance of Air into the Veins.

A boy, twelve years of age, of good constitution, had, from his earliest infancy, the nucleus of a tumor on the left side of the neck, which had gradually increased till it equalled the head in size; in which state he was admitted into the Hotel Dieu in October. There was no change in the appearance of the skin, the tumor occupied the entire left side of the neck, and appeared to have a pedicle; behind it could be felt the carotid artery; above and beneath, the pulsation of the superior and inferior thyroids was perceptible; the tumor was hard, elastic, and covered with large veins, one of which was very voluminous, and ran obliquely from above downwards and from without inwards, so that a longitudinal incision could not be made without dividing it. M. Dupuytren hesitated for some time before he made up his mind to any operation: he remembered the unfortunate result which happened in the case of a young girl in whom he extirpated a large tumor from the neck sometime ago.—[The dissection was almost completed, when, on lifting up the tumor to finish it, a rushing noise was heard, the patient ut-

tered a cry, fell senseless, and, after some convulsions, expired in the theatre. Post-mortem examination demonstrated the entrance of air into the veins and right ventricle of the heart; and it was to the admission of this through a divided vein that M. Dupuytren attributed the death of his patient.] The fear of this kind of accident, of which Graefe has since seen an instance, and which has also been observed by M. Clemot de Rochefort, influenced him in postponing an operation.

The circumstances, as mentioned by M. Clemot, are these:—In the dissection of a tumor from the axilla, all at once a noise was heard like that of blowing, or respiration; the assistants imagined that M. Clemot had penetrated the chest, and the patient (a female), after a lively exclamation of complaint, fell into a state of syncope. After a time, she recovered from the fainting, and M. Clemot tied the vein by which the air had entered. On another occasion, in tying the subclavian after the division of a small vein, a feeble but distinct sound of "aspiration" was heard: M. Clemot put his finger on the vein, and the sound ceased; he removed his finger, and it was renewed. A ligature was applied to the vessel, and no inconvenience resulted. A third time, in the extirpation of a tumor from the breast, which weighed twelve pounds, a similar accident occurred to that which took place in the hands of Dupuytren and Graefe—the patient dying in the course of a few hours.

On examination after death in this instance also, the veins leading from the wound to the heart—the right auricle and ventricle—were distended with air. In the case, however, which more particularly forms the subject of the present articles, the patient was in good health, and the tumor of a nature inevitably to produce fatal consequences if allowed to continue its growth, and M. Dupuytren resolved to operate, taking especial care to avoid the danger above described by making assistants place their fingers in the openings of the vessels at the moment when the raising of the tumor in dissecting it out should have a tendency to produce that kind of suction by which air might be drawn into the veins.

Nov. 22.—M. Clemot, pressing both hands on each side of the base of the tumor, so as to make it pro-

* Medical and Surgical Journal.

ject, a longitudinal incision was made through the skin and integuments, along the whole of the anterior part of the tumor; after which, by a sort of turning out, and dissection of the morbid growth, the pedicle was exposed. This proved to be of such magnitude that it was not deemed prudent to carry the incisions farther. At the commencement some veins had bled, and M. Breschet had applied his fingers upon the orifices: two or three small arteries had also bled, and been tied. A bistoury was now plunged into the tumor, in the hope of diminishing its size by giving issue to the fluid which it was supposed to contain: nothing, however, escaped but a little blood. Hæmorrhage now occurring from numerous points, and the pedicle being too extensive to be divided, a ligature was applied around it, followed by a second and a third. The compression thus effected soon stopped the jets of arterial blood, but not the venous oozing: however, after a little time, this also nearly ceased, and upon the whole the loss was not very great. The patient fainted, but was easily recovered from this by sprinkling cold water on the surface, and he was replaced in bed, it being intended to substitute a metallic ligature for the thread, with a view of commanding the bleeding more effectually, and also of cutting through the pedicle. Two pupils were placed to watch him.

During the day obstinate vomiting took place, which was not arrested by Seltzer water, but which ceased towards evening. The patient lost but little blood during the day, and he appeared to have escaped from the immediate dangers of the operation, when, about three o'clock in the morning, he was seized with convulsions and expired. It ought to be stated, that several times during the operation the patient had complained of choking when any pressure was made on the tumor on the side next the larynx; and this inconvenience ceased when such pressure was removed. What produced the vomiting? It might have been apprehended that the pneumogastric nerve was cut, or included in the ligature, but the post-mortem examination showed that such was not the case.

The tumor proved to be composed of fibro-cellular tissue, partly "degenerated," and of a brownish colour. The

trachea was flattened, from the pressure which had been made upon it. The carotid-jugular veins, and thyroideal arteries, were entire. The tumor had its origin at the left side of the thyroid gland.

M. Dupuytren remarked, that in a parallel case he should probably abstain from operating, for he admitted that the ligature had produced the fatal symptoms and death, while he believed that the incision of the pedicle would have immediately proved fatal by hæmorrhage.—*Lancette Française*.

It appears not a little extraordinary that the narrator of the above case should ask what produced the vomiting? It is quite obvious that it was the sympathetic result of the ligature applied round the pedicle of the tumor, and was part of the disturbance which was caused by this source of irritation—a source to which the death of the patient is to be attributed. Would it not have been better to have cut out the tumor at all hazards, and taken the chance of being able to arrest the hæmorrhage?

HOSPITAL OF ABOU-ZABEL, IN EGYPT.

Amputation of the Arm at the Shoulder-Joint, successfully performed by M. Clot, D.M. and C., Inspector-General of Health to the Armies of his Highness the Viceroy, &c.

MOHAMMED ABDEE RAHMAN, an Arab soldier, 26 years of age, at the siege of Modon, in May 1827, was struck in the inner and upper part of the right arm by a musket-ball, which, after having ploughed up the outer surface of the bone, passed out on the opposite side. The man was carried successively to the hospitals of Patras, Modon, and Alexandria, in the latter of which he remained for sixteen months, and was then removed to Abou-zabel: this was on the 1st of October, 1828. When I first saw him (says M. Clot) in the surgical ward, he was in a very wretched condition indeed: he laboured under general marasmus, extreme debility, diarrhœa, and œdematous swelling of the shoulder, arm, and fore-arm. There were three fistulous points on the anterior superior part of the limb, from

which a very abundant discharge of purulent sanies was continually flowing. Several splinters had come away. A sound introduced into the fistulous openings easily made its way into the articulation, and indicated that the osseous surfaces were become quite bare.

The only resource in this case evidently was to amputate at the joint; and after a consultation it was agreed to do so. I performed the operation on the 24th of October, in the presence of the Professors of the School, several military surgeons, and the pupils. I employed the method of Lafaye, as modified by Richerand, and consequently dispensed with the compression of the axillary artery. The patient being seated in a chair, with the arm extended horizontally, I took a long bistoury and made an incision from the inner part of the acromion, going downwards perpendicularly about four fingers breadth, and then a second, extending from the posterior part of the apophysis, and of the same size as the first. I next united these two incisions by a cross one, and dissected off the flap down to the humerus. I then divided the tendons and the capsule, and took out the head of the bone with great facility; finally the artery was divided, and tied in a moment. The whole occupied but a few minutes. I found the glenoid cavity rough, and stripped of its protecting cartilage, with a large portion of it in an unsound state: this I removed with a gouge and mallet, and, before laying the flaps in apposition, took away also a bundle of diseased glands that were situate on the anterior border of the axilla. The flaps were closely united with straps of sticking-plaster, and a suitable bandage. The patient was then put to bed, and ordered some ether draught, with an infusion of linden.

On examining the amputated limb, it was found that the arm, forearm, and hand, were œdematous in their whole extent, and infiltrated with serosity; the muscles were pale and colourless; those of the arm were as if baked. The humerus being stripped of all the soft parts which covered it, was seen to be as it were composed of two parts: the first comprising the head of the bone and about three inches of the reticular substance; this part was entirely necrosed, and formed a sequestrum lying within the other as in a case. The second portion included the whole length of the

bone; and its bulk was twice that of its natural state. It was covered all over with osseous growth, which gave it the appearance of a strange production.

In the evening the patient's skin was hot, his pulse frequent, and his tongue dry.

Ordered lemonade and low diet.

The night passed over calmly, with sleep at intervals. On the 26th the bandage appeared wet with a copious serous exudation. This was set to rights, and the same treatment of lemonade, &c. continued.

On the 27th the patient had evidently spent a bad night: his pulse was unusually frequent, his tongue parched, and his respiration embarrassed; there was also an erysipelatous blush on the right side of his chest—the side corresponding with the operation. He had a cough too.

Diet as before. A pectoral ptisan.

Emollient fomentations to the part.

Another tranquil night, with a great improvement in the symptoms: pulse lower; tongue moist; the bandage apparatus impregnated with but a very small quantity of pus; the flaps so far united as to present a wound of no more than three or four lines at some points of their circumference. The patient calling for food.

Pectoral ptisan. Rice cream.

The erysipelatous blush disappeared next day, and every thing proceeded prosperously. The wound was now cicatrized at all points, except where the ligatures came out, and these were thrown off completely on the fourteenth day after the operation. Convalescence.

This case shews the triumphant efficacy of art even in the most desperate conjunctures; in Egypt too especially, where, as it has been frequently observed by medical practitioners, and particularly by Baron Larrey, wounds get well with surprising facility.—*Ibid.*

NOTICES.

The communications of Dr. Merriman, Mr. Robinson, Mr. Parker, Mr. Swann, and Mr. Berry, have been received, but too late for the present No.

Dr. Conquest's cheque for FIVE GUINEAS, in behalf of the family of the late Dr. Nuttall, has been received.

Mr. E. Y. is informed that due notice will be given of the subject to which he refers.

W. WILSON, Printer, 57, Skinner-Street, London.

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LECTURES

ON

COMPARATIVE ANATOMY,

AS ILLUSTRATIVE OF

GENERAL AND HUMAN PHYSIOLOGY,

*Delivered in the Medical School of
Birmingham,*

By S. LANGSTON PARKER.

LECTURE VIII.

On the Sense of Smell in different Animals.

GENTLEMEN,

THE second special sense, considered in the degree of its anatomical complexity, is that of smell, by the exercise of which we are made acquainted with the intimate composition of bodies through the medium of one of their properties, termed "odour."

It is manifest from the nature of odours that we may determine, in some measure, *à priori*, what ought to be the structure and disposition of the organ designed to collect and impress the odoriferous molecules of bodies upon the sentient surface. Thus the olfactory apparatus is placed anterior to that of all the other senses, that it may the more easily discover the floating odorous particle. It is likewise situated in the course of the organs of respiration, so that the air passing to the lungs upon dilatation of the chest, carries in those odours disseminated through it, which are necessarily arrested by the mucus of the pituitary membrane, which is, in this part, more abundant than upon any other mucous membrane of the economy, owing to the size and number of the cryptæ or follicles with which it is provided. A special nervous agent should also be present, to take cognizance of the impression produced, and transmit this sensation to the brain, as the

nature of odour renders a transmitting agent absolutely necessary.

Blumenbach considers smell to prevail more extensively than taste in the animal kingdom, as it directs, in many instances, the impulses of the generative system, by finding proper objects for its gratification*. Willis thinks it to be an appendage to the digestive function, guiding the animal in his choice of food, and being, as it were, a precursor to the actions of taste†. It is active in both these instances, but appears to be more exclusively connected with the digestive function. With regard to the sense of smell in the invertebrate tribes little certainly is known, and whenever the sense, or its modifications, are met with, their function must be imperfect and general, and more nearly allied to the ordinary properties of the skin in a greater or less part of its surface, as no special organ is found to which the sense can certainly be attributed, neither is there any special nerve for its action, as we adopt the opinion that no true brain exists in any animal inferior to the pisces.

It is in the four classes of vertebrate animals only, then, that the olfactory sense, and its organ, becomes manifestly particularized‡; it is in these classes alone that a cavity, more or less complicated, is met with situated at the most anterior point of the body, adapted to the collection of the odoriferous particles floating through the extent of the atmosphere, in whom a viscid mucus covers the surface of the membrane receiving the impression which is calculated to retain these particles, and apply them to the pulpy termination of the nerve, by which the sensation of smell is perceived.

The organ of olfaction, generally considered, is, as we have said, situated at the most anterior extremity of the point of the animal,

* Manual by Lawrence, p. 271.

† De Animæ Brutorum.

‡ Rudimentary olfactory organs are to be found in the cephalous mollusca; no other invertebrate animal presents the slightest indications of a special structure for this sense.

and is placed above the organ of taste, (with which it communicates posteriorly in most instances) and in the space between the two superior maxillæ. In its most simple state, and where we may suppose the sense to be most rudimentary, as in the pisces, a single pouch, or fluid sac, opening externally, and lined by a mucous membrane, is the organ of olfaction. As we ascend the scale, the elements of the conchaenarium, or turbinated bones, become apparent upon a simple scale, as in the reptilia generally. These parts are more evident and complicated still in the class aves, whilst the æthmoid and its dependencies, the frontal, æthmoidal, and splenoidal cells, with the voluminous spongy bones, are only present in the mammalia, where we suppose the sense to be most perfect and effective. These organs are, as it were, accessory and not essential to the sense, since this properly resides in the organization of the Schneiderian or pituitary membrane. This membrane, being continuous at the edge of the external nares with the common integuments, and posteriorly with the mucous membrane of the mouth, does not differ in its component parts from them, which are every where similar in the number of their elements, these elements however being, in particular organs, subject to certain varieties, which we have noticed, as they affect the organ and the sense of taste. In the olfactory organ the chorion is spongy and gelatinous, adhering to the subjacent tissue, which is never muscular; papillæ are not observable on its surface, as upon that of the gustatory mucous membrane. This portion of the olfactory membrane varies in its disposition in the different parts of the apparatus; in no other, except its orifice, where it is continuous with the skin, is it provided with any phemeral or inorganic appendices, as hairs, which are here manifest. Where the sense is more remarkably developed, as on the surface of the septum narium, and turbinated bones, the membrane is spongy, and possesses an immense quantity of mucous cryptæ. In the sinuses, on the contrary, the membrane is thin and vascular. The epidermis of the whole surface is extremely thin, and the pigment of the rete mucosum rudimentary. In the class pisces, the distinctive character of the olfactory organs is that of a membranous pouch, double or single, placed between the bones of the face, and opening externally immediately above the mouth, but in some instances beneath it. It is capable of being closed externally by a valvular apparatus. The olfactory membrane, in which the first pair of nerves is distributed, presents a remarkable disposition in the interior of this pouch, a cavity which is nearly hemispherical. This membrane is disposed in a plicated and radiated manner round a centre, from which

proceed an infinity of little folds, which are almost in contact, and between which the water penetrates. These membranous folds appear to supply the place of the turbinated bones in the mammalia, and by increasing the olfactory surface, to render the sense more vivid and powerful. It is uncertain to what extent the olfactory sense pervades in the pisces, as the manner in which odours are diffused in water must be widely different from that exercised in the air. Carus conjectures that the chief use of the olfactory pouches is to ascertain the fitness of the different parts of water for respiration*. The fish cannot be aware of odours at any distance, as he is not capable of inhaling currents of water, and enabling them to pass through the olfactory cavity, in the manner performed by terrestrial animals with regard to air. The sense in this class appears to me to be passive, and the animal unprovided with any apparatus by which he can augment its activity. The density of water, and its temperature, must also confine the odorous particles to a small space surrounding the body or substance which exhales them, and this is another disadvantage placed in the way of the action of the olfactory sense. The rudimentary state of the faculty of smell in the pisces appears to be compensated for by the development of the organs of sense and vision. The odours not being enabled to seek the olfactory organs in this class, it is necessary that the sentient surface by which these properties are perceived, should be multiplied to every possible extent in their points of contact with the surrounding medium, through which the odours are so partially disseminated, this being accomplished by the peculiar disposition of the plicated membrane of the olfactory pouches*.

The deficiency of the mechanical apparatus of smell in the class pisces, may probably account for the excessive development of the nervous agents. The amphibia are, with regard to their olfactory organs, the link connecting the pisces with the terrestrial reptilia. The nasal, or olfactory sac, is frequently subcutaneous, and not situated in the intervening spaces of bones. In the class pisces we found the olfactory sac possessing but one opening; in the amphibia the rudiment of an internal opening, or posterior nares, is apparent. The external opening of the olfactory sac is immediately above the mouth, as in the pisces; the internal one, or the rudiments of the posterior nares, instead of being in the vicinity of the pharynx and larynx, as in the mammalia, communicates with the mouth sometimes as far forward as the under surface of the upper lip. Thus, in most of the amphibia, the

* Introduction to Comparative Anatomy, by R. T. Gore. T. i. p. 284.

† Desmoulins et Magendie, loc. cit. T. i. p. 288.

olfactory organ is a small cylindrical sac, with two openings, and anterior and posterior nares; the internal parietes of the cavity are smooth, and no rudiments of turbinated bones are perceptible. In the proteus and seven, the pituitary membrane is provided with folds, which, to a small degree, enlarge the sensitive surface. In all the other orders the membrane is smooth. From the mechanism of respiration in the amphibia, it will be evident that the functions of this olfactory sac must still be very imperfect and rudimentary, as the dilatation of the chest does not act directly upon the external atmosphere, from the distance intervening between the posterior nares and the opening of the larynx.

The examples we have enumerated offer the most rudimentary disposition of the olfactory organ met with in the reptilia; some of the higher orders possess this organ at a more exalted point of complexity. The serpentina who, under this point of view, present the most simple disposition, have the organ of smell composed of a large, oval sac, of fibrous texture externally, and lined by a pulpy and dark coloured mucous membrane. The external orifice, or anterior nares, are situated as in the other orders of this class; the posterior opens farther backward, about the middle of the mouth. The sac is cartilaginous or osseous in the lizards, but no duplicatures of its parietes, to extend the sensitive surface, are yet apparent. In the tortoises and turtles, the first degree of internal complication becomes evident; the rudiments of the turbinated bones, and sinuses of the nasal cavity of the higher classes, are manifest. The sac, instead of being single and simple, as in all the orders we have mentioned, is composed of three distinct cavities, the most posterior of which is the largest; the projections of the lining membrane, which form the separation of these cavities, being the rudiments of the spongy bones. The crocodile possesses the most complicated olfactory organ found in the reptilia, and consequently the most perfect organ of smell. The respiratory canal, or the space between the anterior and posterior nares is of great extent, commencing in the ordinary situation of the nostril, and terminating at the opening of the pharynx. The nostril is divided with a muscle, by which its orifice can be dilated, and in the interior of the nose are three large cells, and a true turbinated bone. In the next class, the aves, the organs of sense and smell are much more developed and acute in their action from the mechanism of their respiration, as well as from the disposition of the internal parts of the nares. The posterior nares occupy the same relation with regard to the pharynx in this class as in the mammalia, and the air admitted by the nasal canal passes, not into the mouth,

as in the greater part of the reptilia, but directly into the respiratory organs.

The frontal, ethmoidal, and sphenoidal sinuses, or cells, are altogether absent in this class, and no true ethmoid is met with. The turbinated, or spongy bones, are three in number, the central being the largest. These parts are, however, improperly termed bones, since their structure is not osseous (except in a few rare instances), in any animal inferior to the mammalia. They are cartilaginous, or fibrous projections into the nasal cavity, whose sole use is to extend the olfactory surface to which the first pair of nerves and atmospheric air are distributed. Birds appear to possess an acute sense of smell, scarcely inferior to that of the mammalia, although their olfactory organs are much less complicated and extensive; probably the medium they inhabit enables them to collect with greater facility the odorous molecules, in a state of greater diffusion or expansion*. The increased proportion of atmospheric air which they inspire must likewise compensate for any deficiency in the physical disposition of the nares, as a greater quantity of odorous particles may thus be submitted to the sentient surface. The differences which the various orders and families of the aves present in the disposition of their olfactory organs, relates principally to the nature of their food; thus the conchænarum are much more developed in carnivorous tribes than in those feeding on seeds or fruits; the varieties which are met with relate to the volume, and development of the internal conchæ. It must be evident that the power of the olfactory sense, *ceteris paribus*, depends upon the quantity of atmospheric air which traverses the nasal canal into the respiratory organs, as in the greatest quantity of air, the largest proportion of odorous molecules may be supposed to be diffused. If we call to mind the mechanism of respiration in the reptilia and birds, we shall instantly be enabled to judge of the proportional activity of the sense of smell in the two orders, and what is the disposition of parts necessary to render the sense perfect.

In the reptilia we saw the posterior nares opening into the cavity of the mouth very far forwards, in some instances even immediately behind the upper lip, there being no correspondence between the opening of the glottis and the posterior nares; thus, when the glottis (which in these orders is generally moved by a voluntary class of constrictor muscles) is opened, the air does not pass directly into the lungs from the surrounding atmosphere, but from the cavity of the mouth, into which it is received from the posterior nares, and in which it remains as in a provisional receptacle, till required

* De Blainville, Principes d'Anatomie Comparée, p. 315.

for use. The mouth is filled occasionally with air as it is wanted, which gradually passes into the lungs, as there is but one deep inspiration in several minutes. There being no motion of the chest in the chelonians and batracians, and its parietes consisting of one single bone, a mechanical apparatus in the mouth is necessary for respiration, and the nature of this disposition requires but a single inspiration in many minutes, or even a longer time; so that the proportion of atmospheric air submitted to the olfactory organ is but small. In all the higher animals, as the aves and mammalia, and indeed in all those reptiles which breathe by ribs, as the serpentina and sauria, or lizards, the air passes directly, at each inspiration, into the lungs; and these inspirations varying from fifteen to forty in a minute, the quantity of air submitted to the olfactory organs must necessarily be very great. Thus we see that the sense of smell depends upon the proportion of atmospheric air passing by the nasal canal to the respiratory organs, and the mechanical disposition of these parts in the reptilia and higher animals, render the faculty more acute in the latter than the former, from the causes we have mentioned. We now come to speak of the olfactory organs of the mammalia, in which class all things concur to render the sense perfect.

In this class the respiratory organs are well disposed for the admission of a large proportion of atmospheric air through the nasal or olfactory cavity, at frequently-repeated inspirations. The accessory parts of the cavity are likewise more complicated than those of any inferior class, and are better adapted to retain and perceive the odorous particles of the atmosphere. A true ethmoid is first apparent in the mammalia, and is composed of a number of thin osseous cylinders, or lamellæ, which multiply to a great extent the surfaces over which the olfactory nerves pass in their trajet to the nose. The olfactory cavity is filled, to a greater or less extent, by thin osseous laminae termed conchæ, or turbinated bones, which are reticulated, convoluted, and tubulated in various ways, corresponding to the perfection of the sense they are designed to perfect. The meati, or small spaces, intermediate to the spiral laminae of the ethmoid and maxillary spongy bones, form communications between the olfactory cavity, properly so called, and the sinuses or cells in the plates of the frontal sphenoidal, and maxillary bones, which tend in a great measure still more to perfect the olfactory sense. The internal parts of the apparatus of smell which are added in the mammalia, are then the superior spiral or spongy bones of the ethmoid, and the cells or sinuses hollowed, as it were, in the bones of the face and head. An external portion is also met with here, which is so

organized as to collect with greater facility the odours floating in the atmosphere; such are the lateral cartilages or ala of the nose and its muscles, by which the cavity of the nostrils can be elevated, depressed, or expanded, according to circumstances. With regard to the mammalia generally, the olfactory organs are more imperfect in the young than in the adult animal; the separation of the tables or plates of the bones, and the prolongation or extension forwards of the face, giving rise to the formation of the various sinuses, and to the increase of the convolutions of the inferior turbinated bones. The activity of the organ of smell may be generally ascertained by the size and prolongation of the face, determined by the multiplicity of the laminae of the spongy bones and the development of the sinuses, which are more evident in the omnivorous and carnivorous animals than in the herbivorous. We shall now offer a few remarks upon the individual disposition of the sinuses and conchæ in the various classes, by which we shall ascertain their true nature and use. The carnivora perhaps, of all animals, present us with the most complicated and perfect organ of smell, from the vast extent of the nasal cavities, the consequently great surface of the olfactory or pituitary membrane, and the convolution of the inferior turbinated bone, or maxillary conchæ. In the orders possessing the greatest development of the sense, the whole nasal cavity is filled with a spongy tissue, through which the air must pass in its way to the lungs. Each lateral mass of the ethmoid, separated by the perpendicular plate, is divided into a vast number of tubulated cells and laminae, arising from the inferior surface of the cribriform plate; the frontal portion of the cells prolong themselves backwards into the substance of the os-frontis, in communicating with the sinuses of that bone; the inferior or sphenoidal portion forms cells, likewise communicating with the sinuses of the sphenoid. The inferior or maxillary portion of the turbinated bones is attached to the outer side of the nasal cavity, and fills the whole respiratory canal with a tubulated spongy tissue. The maxillary sinus, or antrum, is small and rudimentary. The extremity or point of the snout, or nose, acquires, in many animals of this order, a great motive power, by which they are enabled to direct it to any point to collect the odorous particles constantly disseminated through the atmosphere. This motion is performed by the increased power and volume of the small muscles acting upon the ala nasi of man and the quadrumana, and likewise by the addition of proper muscles not found in either of these orders. The osseous openings of the anterior nares in the mammalia are enlarged and elongated by

the addition of central and lateral cartilages, which are not met with in any inferior animal.

In the herbivorous and omnivorous animals, the lateral laminae of the ethmoid are not convoluted to that extent of complication remarkable in the carnivora; the inferior or maxillary spongy bone is plane and single, or divided into two or three accessory portions, very different from the reticulated and tubulated structure of this part in the carnivora. The sinuses, on the contrary, are enormous, as exemplified in the hog, where they extend between all the bones of the head. In the ruminantia they are continued into the horns. In the hog, the sphenoidal and maxillary sinuses extend into the pterygoid and zygomatic processes. In the elephant the frontal sinuses are enormous, but the remaining olfactory apparatus is in a medium state of development. The muscles of the anterior nares are not so numerous and complicated in the herbivorous as in the carnivorous tribes; in the latter also they are concerned in the expression of those passions which are indicative of their character, and are in strict accordance with the activity of the respiratory and consequently the olfactory system.

In the human subject the apparatus of smell is, in all its parts, at a medium, and in some at the minimum point of organization. The laminae of the ethmoid are small and plane, not presenting the tubulated or reticulated structure; the spongy bones offer the same disposition; the frontal and sphenoidal sinuses are small and rudimentary; the antrum of Highmore moderately developed, and the extent of the whole nasal cavity (from the unique form of the nose and the diminutive prolongation of the jaws) much less in proportion than that of animals generally. The barbarous nations, as the North American Indians, who are said to distinguish at a distance the approach of an European or Indian by the smell, and to distinguish between them, are remarkable for the development of the posterior nares and the development of the inferior spongy bones*.

Such are the principal features of the anatomical disposition of the mechanical agents of smell. The nervous agents now remain for consideration. In the preceding lectures we have omitted speaking of the special nerves of the senses, as it appeared their functions would be better understood by considering them with the other organs composing a special sense. In the pisces the nerve presents an infinite variety in its anatomical disposition, varying in each order

and in each species. Sometimes the nerve arises from the most anterior of the series of lobes forming the brain of the pisces; and before its division into filaments for distribution into the olfactory sac or chamber, it plunges into a ganglion of medullary matter termed the olfactory lobe (which we have described in the preceding lectures). At others, the olfactory lobe is attached to the anterior border of the cerebral lobes, and thus becomes one of the ganglia of the brain itself, from which the nerve arises. It will be recollected that we alluded to a physiological law which established, "that when the action of any pair of nerves became exalted and particularized, that the part of the brain or appendages (from whence this nerve derived its origin) was elevated into a medullary lobe or ganglion, to fortify and strengthen its functions: this seems to be the use of the first ganglion of the sensitive system (the olfactory) in the pisces and reptilia, as well as the aves and mammalia. In the reptilia the disposition of the first pair is similar, the nerve arising by a filament and plunging into the lobe, or taking its origin at once from the olfactory lobe.

In the class aves the fibres of the nerve arise directly from the olfactory lobe, but the sense appears to have a more extended connexion with the sensorium by means of a single external root passing from the olfactory lobe backwards, into a fissure occupying the situation of the fissura sylvii in the mammalia. Thus, in this class, the connexions of the sense with the brain become more intimate than in those of the reptilia and pisces, but not so extensive as those possessed by the mammalia. In the mammalia we have, in addition to the olfactory lobe, three roots, or filaments, appended to that portion of the brain which gives off the first pair of nerves. The three roots, however, only exist in man; in all the other mammalia they are reduced to two. The external root takes its origin from that portion of the brain termed by Serres the lobulus hippocampi, and always corresponds to the development of this lobe, which we stated to arrive at its greatest volume in descending the scales. The external root of the olfactory nerve also is rudimentary in man, and goes progressively increasing from man to the quadrumana, carnivora, ruminantia, and to the inferior mammalia, as the rodentia. The internal root, which is attached to the internal part of the base of the anterior lobe of the cerebrum, a little in front of the commissure of the optic nerves, is placed in the same situation in man and the quadrumana; but in descending to the rodentia and chiroptera, the interior root separates from its connexion with the optic commissure, and is placed more and more anteriorly; so that, by this movement, the distance between the external and internal

* For descriptions of these parts in the North American Indian and Ethiopian, see "Blumenbach's Physiology," by Elliotson, p. 287; and his "Decas Prima Collectionis Cranium diversarum gentium Illustrata," Tab. 9.

root is augmented to a considerable extent. The separation of these roots leaves an intervening space on the inferior surface of the brain, circumscribed laterally by the roots of the olfactory nerve, anteriorly by the union of these roots in the olfactory lobe, or its rudiments, and behind limited by the point of the lobe of Hippocamp and the commissure of the optic nerves.

This space, termed the *champ olfactif**, progressively increases from man to the carnivora and rodentia, following the same progression as the prolongation forwards of the face and the extent of the nasal fossæ. The olfactory lobe or peduncle results from the union of these roots of the nerve, and this lobe is larger as the roots are more voluminous, which we have found to be the case in the lower mammalia. Thus we see that in these orders the nervous apparatus of smell becomes excessively complicated, consisting of the olfactory lobe, which itself results from the union of the two roots of the nerve, an external and an internal, and the space comprised between them, the *champ olfactif*, olfactory fillæ or space, nearly the whole of the base of the anterior lobes of the higher mammalia, as man and the quadrumana, and a much greater extent in the inferior classes, being placed in connexion with the olfactory sense by means of this complicated nervous apparatus. (See Serres, p. 287, for additional matter.) The essential seat of smell, then, resides in that portion of the brain termed the olfactory space, comprised between the roots of the nerves—the accessory parts of the apparatus, as the roots of the nerves, and the nerves themselves, being the conductors or transmitters of the sense, and the optic lobe, or peduncle, being the accessory or perfecting part, as it is the largest in those animals possessing the acutest scent. (See Serres, page 294, d'Anatomie Comparée.)

The terminating or conducting filaments of the first pair arising directly from the olfactory lobe pierce the cribriform plate in the mammalia, and are distributed in a pulpy manner on the olfactory membrane, and not in the form of papillæ, as the nerves of touch and taste†. The “nasopalative” ganglion, situated in the “foramen incisivum,” receives a filament from the fifth pair, and Cloquet conjectures that it is the medium for the exercise of the sympathetic phenomena existing between the senses of smell and taste‡. Here we have another example of

the influence of the fifth pair considered as the sympathetic nerve of the senses, which office we proved it to fulfil in our lecture upon the physiology of this nerve.

In considering the physiological action of the various parts of the nasal fossæ, we are assured that the immediate agents of the sense of smelling are the filaments of the first pair of nerves distributed to the olfactory cavity, since a cavity and a nerve are always met with, and in some animals, as the pisces, these constitute the whole apparatus. It does not appear, however, that the ordinary first pair of nerves, termed the olfactory, is essential to the exercise of this sense, since the nares of the cetacea are supplied by branches of the fifth pair only.

This sense has a more intimate connexion with the sensorium in many animals, particularly the omnivorous and carnivorous, than in man, as that portion of the brain allotted to the perception of odours is much more extensive in animals generally than in man, in whom the olfactory ganglion is merely rudimentary, and the corresponding nerves proportionally small.

The inspiratory motion of respiration in the three higher orders of vertebrata facilitates greatly the application of odorous particles to the olfactory membrane, since at each dilatation of the chest the atmospheric air, and the odours diffused through it, rush through the nasal cavities into the lungs, the odours being retained in their passage by the mucus of the nasal fossæ, and hence the reason of the vast number of mucous cryptæ situated in the pituitary membrane. Under this point of view the carnivorous and omnivorous animals are better provided than man, by the addition of large *alæ nasi* and a projecting snout or muzzle, which can be directed by a proper set of muscles, not found in any other class, to any point to collect the currents of air. That the inspiratory movement is all important to the action of smell, is manifest from the experiments of Lower, Perrault, and Chaussier, who, by opening the trachea of dogs, and thus preventing the entrance of the air into the lungs by the nasal fossæ, have destroyed the olfactory sense, and caused the animals to devour substances which they previously refused.

Thus we see why the organs of olfaction are placed at the entrance of the respiratory system; they may probably, in addition, judge of the fitness of the atmosphere for respiration, and then this sense becomes essential to the respiratory function, as that of taste is with regard to the digestive.

The viscid mucus of the pituitary membrane is calculated more particularly to entangle the odorous molecules, whilst the ill effects of evaporation, which would destroy the activity of the sense, are provided against by the secretion of a vast quantity of a thin aqueous fluid, by the membrane of the frontal and sphenoidal sinuses, &c. That the chief

* Serres, *Anatomie Comparée du Cerveau*, t. 1. Paris, 1827.

† Blumenbach loc. cit. p. 236; Scarpa, *Anatomicæ Disquisitiones de Auditu et Olfactu*, Mediolani, 1794; Summerring, *Icones Organorum Humanorum Olfactus*, 1810.

‡ H. Cloquet, *Traité d'Anatomie Descriptive*, t. 2, p. 206. Troisième Édit. Paris, 1824; O-phrésiologie, ou *Traité sur les O-leus*, sur le Sens, et sur les organes de l'Olfaction. Paris, 1815.

use of these sinuses is to furnish this fluid, is evident from their being of such vast extent, where the quantity of air admitted through the olfactory cavity is greatest, as in the carnivora and herbivora. They are not essential but accessory to the perfection of this sense. That the frontal sinuses, &c. do not concur directly in the function of smell, is manifest from their insensibility to stimulating injections, and their absence in many of the mammalia and in every inferior animal. Patients have had fistulæ of these sinuses which have been injected with impunity by Dessault and Deschamps, no sensation having been produced.

The immediate function of the conchæ narum, or turbinated bones, is to increase the sensitive olfactory surface, and thereby to present a greater extent for the reception of the odorous molecule, as their extent is greatest in those animals where the sense is most acute. Their spongy structure may collect and retain the air, and thus apply its odorous particles to the olfactory membrane. Where the tubulated structure is present, the air may be directed along them, and better dispersed to all parts of the cavity. This and the reticulated structure is only found in those animals possessing the finest scent, as certain of the carnivorous mammalia, the lion, cat, dog, &c. &c. In the seal, it is conjectured by Harwood, that the extent of the spongy structure of the nares amounts to 120 square inches in each nostril.

These parts are, however, accessory to the perfection of the sense, since they are only added in the higher animals. Its immediate functions reside in the pulpy extremities of the nerve distributed to the olfactory membrane, principally in the upper part of the nasal cavity, all the other organs being designed to increase the extent of surface to which the nerve is distributed, or to collect and retain the odorous particles of the atmosphere, by which the nerve may be better enabled to receive and transmit their modifications to the brain.

ON CERTAIN DISEASES OF THE SKIN.

Abstract of a Clinical Lecture lately delivered

By DR. GRAVES.

AT THE

MEATH HOSPITAL, DUBLIN.

Pompholyx Diutinus.

GENTLEMEN,—The case of the boy who was admitted into the hospital in the beginning

of last September, labouring under a disease of the skin called *pompholyx diutinus*, is well worthy of your attention. This boy was fourteen years of age at the time of his admission, and although his frame was slender and his constitution apparently delicate, yet, with the exception of the cutaneous disease, he had enjoyed for many years an uninterrupted continuance of good health. The eruption had lasted five years; during which time the succession of bullæ had seldom ceased. When he came under our observation, the bullæ occupied, in very considerable numbers, not only the face and extremities, but also the trunk, and were in various stages of progress—some healing after having burst, some of a large size and unbroken, while others were small and recent.

This disease is well described by Bateman, who makes some judicious remarks upon its treatment; but I think that Biett's description is not only fuller but more exact. From the observations of these authors, however, you cannot form an idea of the occasional severity of *pompholyx diutinus*, of which I have seen two cases in young men, where the irritation and suffering produced by the constant exposure of large portions of skin denuded of epidermis, had operated most unfavourably on the general health, almost banishing sleep, and reducing the patients to a state of great debility. As these cases had proved extremely obstinate, and had not yielded to any of the modes of treatment recommended by Bateman and Biett, my confidence in their plans was naturally shaken, and I determined, when opportunity offered, to have recourse to a new method of treating this complaint.

When this boy, therefore, came under my care, instead of using either the constitutional or local remedies which I had tried before, I directed all the bullæ to be opened with a lancet, and the denuded surface of the corium to be touched with a stick of nitrate of silver. The caustic was applied also to the skin around each bulla, for the breadth of a line; and the nascent pimples which indicated the formation of future bullæ were all subjected to the same treatment. He was then washed, and got clean linen. This single application of the nitrate of silver had not merely the effect of entirely destroying the morbid action in the portions of the skin which were at the time affected, but, what is very remarkable, no fresh bullæ have since made their appearance, although nearly four months have elapsed. The only part of the surface which required a repetition of the process was the palm of the hand, where the thickness of the epidermis rendered it difficult to expose the diseased surface of the corium to the full action of the caustic.

Although the results of a single case,

however successful, do not justify us in concluding that the method of treatment adopted will prove equally efficacious in eradicating every similar eruption, yet the benefit obtained was so striking that we may with confidence consider nitrate of silver as an useful addition to the therapeutical agents already in use for the cure of this disease. The fact that an affection of the skin so general, and of such long continuance as to merit the name of a constitutional disease, should be cured by local means alone, is not so easy to explain. As the fluid generated within the bullæ is said not to be contagious, we must refer the cure to the simultaneous destruction of all the parts in a state of morbid action—a morbid action which would have been otherwise propagated to other parts of the skin by the sympathy of continuity, as it is termed. In the number of the Edinburgh Medical and Surgical Journal published on the 1st of January, I observe, that, in a paper upon *yaws*, Mr. Mason says he has derived great benefit from the direct application of nitrate of silver to the yaw tubercles; and in one recent case, this treatment being continued for a few months, “the papulæ disappeared, and no other tubercular yaws were formed.” It appears, from a subsequent experiment, that although the disease was thus, as it were, cut short, yet the patient’s constitution was not secured from a future infection, as it would have been had the yaws been allowed to run their usual course. Here, therefore, we have another example of a local application to the skin preventing the development of, and as it were suppressing, a constitutional disease.

Iritis in Button Scoury.

We have lately had in the hospital a disease of the skin, which, in the form of eruption and in being communicable by contact, bears a striking resemblance to yaws: I mean *button scoury*.

This case presented one fact which is worth bearing in mind, in comparing button scoury either with the yaws, sabbens, or syphilis. While under the influence of an alternative course of mercury, which had been continued long enough to produce an evident action on the gums, the patient’s right eye became red and inflamed, and, in spite of local depletions, a violent attack of iritis was formed, and only yielded to salivation rapidly excited by large doses of calomel. The salivation produced a speedy diminution in the button scoury, and soon cured it also.

Nitrate of Silver in Psoriasis.

The effect of this application in the case of psoriasis at present under treatment, is well worthy of your attention. You may recollect, that when this patient, who is a

strong and otherwise healthy man, was admitted seven weeks ago, he presented a specimen of *psoriasis diffusa* of the worst character.

His scalp, extremities, and trunk, were almost totally covered by its inflamed and scaly patches, of all sizes and in all stages. It is particularly to be remembered, that scarcely a day passed in which new spots of the disease did not make their appearance, as was obvious from the great number of minute and recently formed patches which were intermingled with those of older date.

Having previously cleared away as many of the scales as possible, by means of ablutions with yellow soap and water, and having thus, to a certain extent, exposed the diseased portions of the skin, I directed all the spots in succession, and also the skin immediately around them, to be rubbed with nitrate of silver, the surface of each being first rendered slightly damp, in order to render the application more active. The proper application of the caustic to such numerous spots, and to so extensive a diseased surface, was a business which required much attention and trouble; which, added to a fear that this process might excite excessive cutaneous irritation, if too generally and too suddenly applied, prevented us from touching all the spots before the end of the fifth or sixth day. The effect of this treatment has been an amendment more rapid than I had anticipated. The newly-formed and recent patches of the disease yielded to the first application, and presented, when the black crusts it formed had fallen off, a healthy surface. The older and more extensive spots, as might have been expected, proved much more obstinate. In every case, however, their further increase in size has been prevented, and most of them have finally yielded to repeated applications of the caustic. One very large and inflamed spot on the fore-arm was first leeches and poulticed. Judging from the progress already made, I think that the cure will be completed about the end of the ninth week. It remains to be seen whether it will be permanent. One circumstance is worthy of remark—that the tendency to produce new patches of the disease, which existed when this patient was admitted, has in a great measure ceased, and latterly very few have been generated. On the whole, then, this method deserves a further trial, and in recent cases it may perhaps even succeed in altogether stopping the progress of the disease. Of course I do not mean to recommend it to the exclusion of the other modes of treatment, recommended by Dr. Duffin and M. Bielt, and which you have seen so often successful in this hospital: I merely propose it as an useful adjuvant in obstinate cases. That psoriasis is ever propagated by contagion, is denied by authors, but facts

have come under my observation which are quite conclusive as to this point, and establish the occasionally contagious character of psoriasis; and consequently, whatever method of treatment you use to effect a cure, you should carefully guard against a relapse by avoiding all possible sources of contagion—such as the clothes worn by the patient during his illness.

ON A MODE OF EXTRACTING PESSARIES.

To the Editor of the London Medical Gazette.

SIR,

OF the various means employed to support and preserve in its place the prolapsed uterus, few have been found so advantageous and effectual as the hollow globular pessaries, formed of box-wood; but a great inconvenience is sometimes experienced when these pessaries come to be withdrawn after having been permitted to remain too long in the vagina. Levers, forceps, perforating scissors, and other instruments, have been recommended and employed, but none of these instruments can be very conveniently made use of, and the operation of extracting this kind of pessary is often attended with much pain and suffering to the patient.

Some time ago I was called upon to remove a globular pessary, which had been retained ten years, and I was for a long time foiled in my endeavours to extract it. I tried various instruments, but could succeed with none of them; a pair of small forceps appeared most likely to effect the extraction, but I could not keep the ball sufficiently firm to bring it through the os externum, so that I was obliged to leave my patient, in order to procure another instrument, with which I did not doubt of success.

This instrument was that part of Signor Assalini's perforating machinery which consists of a long round wooden handle, into one end of which is inserted a pyramidal screw, the base being about half an inch in diameter, and the screw rising to a point nearly half an inch from the base. The point of the screw being brought in contact with the pessary, and the pessary kept steady with two fingers of the right hand, the handle is to be turned round repeatedly. The

point of the screw easily enters the pessary, and as the screw, acting as a wedge, advances, the pessary splits into pieces, which are easily extracted by the finger, and the degree of suffering to the woman is really not worthy of mention.

In August last, at the request of a friend, who had been foiled in his endeavours to extract a pessary, I used the same means, and succeeded most happily; and I have again succeeded in another case, so that I have no hesitation in recommending Assalini's screw as the most effectual method of dislodging the globular pessary in all similar cases.

The instrument which I employed was furnished to me by Messrs. Stodart of the Strand, the original makers of Assalini's instruments.

I remain, Sir,
Your humble servant,
SAMUEL MERRIMAN.

Brook-Street, Grosvenor-Square,
Jan. 12, 1831.

ON THE HOUR-GLASS CONTRACTION OF THE UTERUS.

To the Editor of the London Medical Gazette.

7th January, 1831.

SIR,

A FEW weeks ago I sent you the particulars of a case of accouchement, which you did me the favour to publish in a late number of the Gazette.

That case went to support the opinion of "hour-glass contraction" of the body of the uterus. The facts of that case did not come under my own observation, but I have just attended one myself, which, though it cannot negative the facts of that case, will, I think, shew the great liability which exists, to the mistaking of contraction of the os or cervix, for that which is generally understood by "hour-glass contraction" of the uterus. Will you oblige me by giving publication to this also; and as I wish it to refer to the former case, I will mention that my name was then signed, by mistake, W. instead of G.

As this case is interesting in many points of view, I shall take the liberty of giving it to you, verbatim, from my note book.

Mrs. H. aged about 50, a large framed

robust woman, in good health, pregnant for the second time. Her last pregnancy was four and a half years ago—child dead. Pains of this labour came on the night before last (5th) about 10 P.M. The escape of the liquor amnii, as she lay in bed, was the first sign of the approach of labour. I found the os uteri dilated only to the size of a sixpence, and the pains so trifling and unfrequent that I left her. Saw her about 9 o'clock the next morning (6th). Pains had continued through the night; exhausted her very much, and had produced no effect on the os uteri. Sent her Træ. Opii, ʒj. in a draught. About ten o'clock last night went to her again; I heard that her stomach had almost immediately rejected the opiate, and the pains had continued in the same wearying and inefficient manner through the day; out of spirits, and much exhausted; pulse small and frequent—somewhat labouring. I took about half a pound of blood from the arm, (which afterwards had a thick sisy, not buffy coat) and then gave her two “stiff” glasses of hot brandy and water. Her spirits immediately rallied, and the pains increased both in power and frequency: by 12 o'clock, however, they had gone off; os uteri about the size of a crown-piece; in this state I left her. About half-past 5 this morning I was called to her again. Dilating pains were gone, but bearing pains were very trifling, and had no effect on the head of the child. Very low and exhausted; pulse feeble. I delivered with the forceps. The belly, however, which had been very large and pendulous, was but little diminished, and on examining, I found a fresh bag of membranes; found the breech presenting, ruptured the membranes, and pulled down one foot. I hastened the delivery, the uterus but very feebly assisting. This child was dead, and the cuticle peeling off. Finding no pain, I twisted both funes, and gently dragged upon the uterus; but as I could not thus induce a pain, I desisted. In about a quarter of an hour she had one, and the placenta (adherent) came away. In five minutes I examined outside the belly, but could not feel the contracted uterus. I introduced hand and arm, and when as far as half an inch above the wrist, I found a contraction and passage through it. I satisfied myself that up to the contraction I had passed nothing but va-

gina, though very much elongated. This contraction was the os uteri, which I dilated, and found a small piece of placenta adherent. My arm was in the uterus full twenty minutes (the nurse rubbing outside, and cold wet cloths applied all the while) before I could induce permanent contraction. Just, however, as I had procured some ergot, I had effected it.

I am, Sir, yours, &c.

O. GROVE BERRY.

MODE OF DISSECTING THE NERVES.

To the Editor of the London Medical Gazette.

SIR,

THE Editor of the Edinburgh Medical and Surgical Journal having just called upon me for an explanation respecting the delineations of several of the nerves in my recent work, I request the favour of you to give the following a place in the Medical Gazette.

I remain,

Your most obedient servant,

J. SWAN.

January 10, 1831.

[It appears to us that it would have been more appropriate to have sent the subjoined to the Editor of the Edinburgh Medical and Surgical Journal, to whom it is addressed; and we will candidly acknowledge, that had it not contained some interesting remarks on the mode adopted by Mr. Swan in dissecting the nerves, we should probably have declined to insert it on the above consideration.—E. G.]

SIR,—In reply to some remarks in your last journal, on the work I have just published, I am anxious to take the earliest opportunity of offering the following explanation.

Several subjects having been procured for the dissection of the sympathetic nerves, the one from which the plates in my work were taken was ultimately chosen, as having the nerves larger and more distinct than the rest. The preparation was made by removing the integuments and such other portions as were not required; the muscles, arteries, nerves, &c. were then carefully and partially separated, and

the subject immersed in cold water for twenty-four hours. The nerves thus became larger, stronger, and more distinct: the dissection was then proceeded with for some days, when the parts were immersed in alcohol; for if a subject be kept in water too long the nerves become enlarged, and the cellular membrane attached to them swollen out; but by putting it in alcohol they are contracted again to their natural dimensions. On taking the subject out of the alcohol, the nerves dried so fast, and contracted so much, as to make it absolutely necessary to have the parts not under dissection covered with a wet cloth, and the subject placed in cold water for a few hours, once in every four or five days. It was thus, by alternating the use of the water and alcohol, that the subject was kept in the most proper state for dissection. When the dissection was finished, about two-thirds of the alcohol and one of water best preserved the natural size of the nerves.

From preparations thus made, the drawings have been executed, and every care has been taken to give the nerves their natural size, and such appearances as were produced by the particular position of the subject. The dissection occupied many weeks, and the drawings a whole year.

In making a similar dissection, a student must give it his unwearied attention for many weeks, as he may, by any hurry or carelessness for one moment, destroy the minute nerves and be involved in an inextricable labyrinth; and as so much time must be spent as would prevent the completion of the preparation before the natural changes of the subject have destroyed the appearance and texture of the different parts, I am not aware of any way in which he can proceed so satisfactorily as by means of a pointed instrument, and the use of water and alcohol alternately; and if this method is pursued, which appears to me the only one by which a complete and satisfactory preparation can be made, I am thoroughly convinced no student can possibly be deceived by the plates in my work. Unquestionably he will find the nerves to vary in size in different subjects, but in no one will he experience such a deviation from my plates, as to the size of the principal nerves, as can for a moment mislead him: the shading underneath may possibly, in some measure, have given them

an appearance of being larger than they are in reality, but the fact I am satisfied is otherwise.

In Scarpa's work some of the nerves are larger than they are in mine, but, without concluding from thence that he has committed any error, I consider the difference amply accounted for by the difference of size in different subjects; and I have always thought myself fortunate in having met with one which afforded, in this respect, such advantages for delineation.

I have almost completed the preparations for the whole work, and shall have pleasure in shewing them to you, or any gentleman whose opinion respecting them will prove satisfactory to you.

I beg to thank you for the observations you have made, as they will prove to the artists who have undertaken my work that the correctness in the representation of the nerves, in every particular, is required by the public, and that the anxiety and care which have made it appear so tiresome to them, have proceeded entirely from the only wish I have in continuing so laborious an undertaking—viz. by the production of a work which should be distinguished for its accuracy and exactness, to render myself of real use in that department of science which it has fallen to my lot to cultivate.

I am proceeding with the work, and hope to have the second part published in June, the third part in December or January, and the fourth as soon after as possible.

I remain,
Your most obedient servant,
J. SWAN.

January 10, 1831.

LUNACY QUESTION.

To the Editor of the London Medical Gazette.

SIR,
THE following case, involving the construction of a clause in the act of parliament, 9th of George IV., cap. 41, commonly called the lunacy act, has recently occurred. As similar cases must of course be occasionally met with in the practice of others, it seems desirable that the matter should be investigated, and a definitive answer given by some competent authority.

A. B. having formerly shewn decided symptoms of insanity, by endangering the lives of his family and making extravagant and useless purchases, to the serious injury of his fortune, was placed in confinement; and after a time recovered, and again mixed with the world.

Within the last few weeks the same train of symptoms have supervened under which A. B. formerly laboured, and which eventually terminated in complete insanity. Sensible himself of the present condition of his health, and that, if left to himself, under the excitement of mixed society and the cares of business, with the too ready access to spirituous liquors, the consequence will again be serious, involving property at least, if not life, he has applied to two medical gentlemen for certificates authorizing his reception into a house licensed for the reception of the insane, where he may be kept *under surveillance*, until the train of bodily infirmity has been subdued, which would almost inevitably end in the full development of insanity. His friends fully concur in the *moral* propriety of the measure.

The question is, does the act of parliament above referred to authorize the placing A. B. in confinement?

My own decided impression is, that it does not;—that some overt and positive act, indicating an insane mind, *must* have been committed before he can be legally placed under restraint; that he must again purchase a pair of horses which he does not want, and again place in jeopardy the life of his infant child (perhaps this time *kill* him) before the law, as it now stands, authorizes the placing of A. B. in confinement.

This opinion, however, has been doubted by another member of the medical profession; and as doubts certainly exist, it is well that they should be cleared up.

The question may be varied, so as to stand thus:—

The act of parliament requires that the medical practitioner, prior to placing A. B. in confinement, should certify that, “having personally examined him, he was found of unsound mind.”

Will the provision of the act be complied with, and the practitioner held harmless, if he *varies* this form of expression, and certifies, “that he has personally examined A. B. and that the

said A. B. is labouring under disease which threatens the immediate attack of confirmed insanity, and which disease, in the opinion of the undersigned, can in no way be effectually treated, nor risk to life and property be effectually secured, except under confinement.”

One word more:—If, as I presume, the act of parliament does not authorize such a variation in the phraseology of the certificate, then may I enquire, whether it would not be desirable to have the act so modified as to include cases which require confinement, not for acts passed, but for acts of insanity threatened? Of course greater safeguards must, in such cases, be provided against the chances of abuse; but this might easily be done by requiring the attestations of three, or even four, medical men instead of two, and by making it incumbent on the parties to apprise the Commissioners of their intention, prior to the signing of the certificate.

I am, sir,

Your very obedient servant,

ONE WHO PREFERS
PREVENTION TO CURE.

London, Jan. 14, 1831.

ON THE MOST EFFICACIOUS MODE OF APPLYING SINAPISMS*.

THE following observations by MM. Trousseau and Blanc will be found useful in settling the proper method of using mustard for sinapisms. They were induced to make some careful experiments on the subject in consequence of the discrepant statements made in works on materia medica. Some recommend that the flour of recently ground mustard should alone be used, others that the bran only of the flour should be taken. Some direct the flour to be made into pulp with warm water, others with vinegar, others with concentrated acetic acid, others with warm water or warm vinegar, indifferently. Some advise that the sinapism be left applied for four hours, others for two or three hours, and others again, for a single hour only. The authors have very carefully determined the respective advantages of these several practices; and it appears from their experiments, that the several circumstances of dif-

* Edinb. Med. and Surg. Journal, from the Archives Générales.

ference are very far from being immaterial.

Their experiments were made chiefly with the black mustard commonly used for culinary purposes in Paris. They first found that the flour loses scarcely any of its activity by keeping. In their standard experiment, they remarked, that recently ground mustard, mixed up to a proper consistence with cold water, caused slight smarting in five minutes, and in ten minutes the heat and sense of burning which characterizes the full operation of the sinapism. They next remarked that flour five months old did not cause smarting within seven minutes, but brought on the full sense of burning in ten minutes, or as soon as the sample of fresh flour. They then found, that when the fresh flour was mixed up with hot, instead of cold water, the smarting commenced in three minutes; but the full sense of burning was not developed in less than ten minutes; and, consequently, although hot water accelerates the commencement of its action, the effect is ultimately and in a very short time the same when cold water is used. The most remarkable results, however, were obtained from their experiments with acetic acid. When the sinapism was made with common vinegar, instead of water, its activity was not increased, as is commonly supposed to be the case; it was, on the contrary, much retarded and diminished. In fifteen minutes there was extremely slight smarting, which increased so slowly, that in fifty minutes it was not greater than was produced by the water sinapism in six minutes. The substitution of warm for cold vinegar did not increase its activity. Neither was any advantage gained by substituting for common vinegar concentrated acetic acid, diluted with its volume of water; on the contrary, no effect whatever was then manifested in forty-five minutes. Nay, concentrated acetic acid itself appears not more powerful than simple water. A sinapism made with it had no effect in six minutes; in seven minutes there was slight smarting; and the full sense of burning was not developed till the twelfth minute. These are interesting facts, because they shew that the mustard-flour and the acetic acid possess the property of mutually moderating the rubefacient or irritating properties of one another. Concentrated

acetic acid itself seems, from the experiments of the authors, to be one of the most rapid, powerful, and convenient rubefacients that can be employed. When applied on a sponge, or mixed with saw-dust, so as to form a mass like that of a sinapism, acute smarting pain was produced in a minute and a half; in a minute more the pain was insupportable; in three minutes from its first application, the experimentalist was compelled to remove it; and notwithstanding the short interval which was thus allowed to pass before its removal, the corrosion produced left a mark three months afterwards. A singular fact, which they have not been able to explain, is, that the activity of a sinapism made with English mustard is not lessened, like that of the French mustard, by substituting vinegar for water.

The following is their account of the several consecutive effects of a sinapism made with water, and of the precautions which should be observed in using it. The first effect is prickling or smarting, which begins in five minutes; in ten minutes, this is converted into acute burning pain, such as is produced by hot iron held near the skin; next, a deeper-seated sensation is felt like that of constriction, or of a heavy weight pressing on the muscles; but after twenty, or twenty-five minutes more, the original burning pain returns more violently than ever, and few, who are not insensible from some affection of the brain, can support the sinapism much longer. After its removal, the impression of the cold air relieves the burning for a time; but this, in a few minutes, returns acutely, is soon attended with an uniform, rosy efflorescence, and may continue more or less severely for twelve hours, or several days. The authors maintain, that if a sinapism is properly made, and of good materials, it should very rarely remain applied longer than between forty-five minutes and one hour; and that, if it is left for three or four hours, as some direct, its effects may sometimes prove extremely unpleasant. In cases of cerebral oppression during fever, they have known severe sloughing induced by the neglect of this precaution, the physician having been misled by the patient not complaining of pain, and having allowed the sinapism to remain for several hours.

ANALYSES & NOTICES OF BOOKS.

“ L'Auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

The Life of Sir Humphry Davy, Bart. LL.D. late President of the Royal Society, Foreign Associate of the Royal Institute of France, &c. &c. &c. By JOHN AYRTON PARIS, M.D. Cantab. F.R.S. &c. Fellow of the Royal College of Physicians. 4to. pp. 547.

A VERY neat biographical sketch of Sir Humphry Davy, from the pen of Dr. Paris, appeared in this journal not long after his death (vol. v. p. 533), and to it we must refer for the general outline of his splendid career. The work before us is a full and comprehensive detail of the whole life of the illustrious deceased; containing an analysis of his discoveries, and an account of his various scientific and literary labours, interspersed with anecdotes. It is the production of a skilful and practised writer, and will become one of the standard volumes of English biography, having a place in all public libraries and in the collections of the opulent; to these, however, in its present form, it must necessarily be limited, for the price (three guineas) is extravagant for such a volume, handsomely got up as we acknowledge it to be.

It will not be supposed that we can follow the author through the mass of matter which he brings before us, nor repeat any general account of the subject of his biography, one having been already given in the pages of the *Gazette*; but we shall glean some anecdotes illustrating the character and habits of Sir Humphry Davy, conceiving it to be within the legitimate scope of our journal to place before our readers any thing calculated to interest or instruct from the history of one originally intended for our profession, and whose life was spent in the cultivation of a science so closely connected with medicine.

Davy fonder of Philosophy than Physic.

While with Mr. Borlase, it was his constant custom to walk in the evening to Marazion, to drink tea with an aunt to whom he was greatly attached.

Upon such occasions, his usual companion was a hammer, with which he procured specimens from the rocks on the beach. In short, it would appear that, at this period, he paid much more attention to philosophy than to physic; that he thought more of the bowels of the earth than of the stomachs of his patients; and that, when he should have been bleeding the sick, he was opening veins in the granite. Instead of preparing medicines in the surgery, he was experimenting in Mr. Tonkin's garret, which had now become the scene of his chemical operations; and, upon more than one occasion, it is said that he produced an explosion which put the doctor, and all his glass bottles, in jeopardy. “This boy Humphry is incorrigible!”—“Was there ever so idle a dog!”—“He will blow us all into the air!” Such were the constant exclamations of Mr. Tonkin; and then, in a jocose strain, he would speak of him as the “Philosopher,” and sometimes call him “Sir Humphry,” as if prophetic of his future renown.

Davy as an Orator, Musician, and Soldier.

It was Davy's great delight to ramble along the sea-shore, and often, like the orator of Athens, would he on such occasions declaim against the howling of the wind and waves, with a view to overcome a defect in his voice, which, although only slightly perceptible in his maturer age, was in the days of his boyhood exceedingly discordant. I may, perhaps, be allowed to observe, that the peculiar intonation he employed in his public addresses, and which rendered him obnoxious to the charge of affectation, was to be referred to a laborious effort to conceal this natural infirmity. It was also clear that he was deficient in that quality which is commonly called ‘a good ear,’ and with which the modulation of the voice is generally acknowledged to have an obvious connexion. Those who knew him intimately will readily bear testimony to this fact. Whenever he was deeply absorbed in a chemical research, it was his habit to hum some tune, if such it could be called, for it was impossible for any one to discover the air he intended to sing: indeed, Davy's music became a subject of raillery amongst his friends; and Mr. Children informs me, that, during an excursion, they at-

tempted to teach him the air of God save the King, but their efforts were unavailing.

It may be a question how far the following fact, with which I have just been made acquainted, admits of explanation upon this principle. On entering a volunteer infantry corps, commanded by a Captain Oxnam, Davy could never emerge from the awkward squad; no pains could make him keep the step; and those who were so unfortunate as to stand before him in the ranks, ought to have been heroes invulnerable in the heel. This incapacity, as may be readily supposed, occasioned him considerable annoyance, and he engaged a serjeant to give him private lessons, but it was all to no purpose. In the platoon exercise he was not more expert; and he whose electric battery was destined to triumph over the animosity of nations, could never be taught to shoulder a musket in his native town.

Effects of inhaling Nitrous Oxide, as exhibited in the person of Davy.

'In April,' he says, 'I obtained nitrous oxide in a state of purity, and ascertained many of its chemical properties. Reflections upon these properties, and upon former trials, made me resolve to inspire it in its pure form, for I saw no other way in which its respirability, or powers, could be determined.

'I was aware of the danger of the experiment. It certainly would never have been made, if the hypothesis of Dr. Mitchell had in the least influenced my mind. I thought that the effects might possibly be depressing and painful, but there were many reasons which induced me to believe, that a single inspiration of a gas, apparently possessing no immediate action on the irritable fibre, could neither destroy nor materially injure the powers of life.

'On April 11th, I made the first inspiration of pure nitrous oxide. It passed through the bronchiæ without stimulating the glottis, and produced no uneasy sensations in the lungs.

'The result of this experiment proved that the gas was respirable, and induced me to believe that a farther trial of its effects might be made without danger.

'On April 16th, Dr. Kinglake being accidentally present, I breathed

three quarts of nitrous oxide from and into a silk bag, for more than half a minute, without previously closing my nose, or exhausting my lungs. The first inspiration occasioned a slight degree of giddiness, which was succeeded by an uncommon sense of fulness in the head, accompanied with loss of distinct sensation and voluntary power,—a feeling analogous to that produced in the first stage of intoxication; but unattended by pleasurable sensation. Dr. Kinglake, who felt my pulse, informed me that it was rendered quicker and fuller.

'This trial did not satisfy me with regard to its powers; comparing it with the former ones, I was unable to determine whether the operation was stimulant or depressing.

'I communicated the result to Dr. Beddoes, and on April 17th he was present when the following experiment was made:—

'Having previously closed my nostrils and exhausted my lungs, I breathed four quarts of the gas from and into a silk bag. The first feelings were similar to those produced in the last experiment; but in less than half a minute, the respiration being continued, they diminished gradually, and were succeeded by a sensation analogous to gentle pressure on all the muscles, attended by a highly pleasurable thrilling, particularly in the chest and in the extremities. The objects around me became dazzling, and my hearing more acute. Towards the last inspirations, the thrilling increased, the sense of muscular power became greater, and, at last, an irresistible propensity to action was indulged in; I recollect but indistinctly what followed; I know that my motions were various and violent.

'These effects very soon ceased after the respiration of the gas. In ten minutes I had recovered my natural state of mind. The thrilling in the extremities continued longer than the other sensations.

'This experiment was made in the morning; no languor or exhaustion was consequent; my feelings throughout the day were as usual, and I passed the night in undisturbed repose.

'The next morning the recollection of the effects of the gas was very indistinct; and had not remarks written immediately after the experiment

recalled them to my mind, I should even have questioned their reality.'

Our philosopher very naturally doubted whether some of these strong emotions might not, after all, be attributed to the enthusiasm necessarily connected with the perception of agreeable feelings, when he was prepared to expect painful sensations; but he says that subsequent experiments convinced him that the effects were solely owing to the specific operation of the gas. He found that he could breathe nine quarts of nitrous oxide for three minutes, and twelve quarts for rather more than four; but that he could never breathe it, in any quantity, so long as five minutes. Whenever its operation was carried to the highest extent, the pleasurable thrilling, at its height about the middle of the experiment, gradually diminished, the sense of pressure on the muscles was lost, impressions ceased to be perceived, vivid ideas passed rapidly through the mind, and voluntary power was altogether destroyed, so that the mouth-piece generally dropped from his unclosed lips. When he breathed from six to seven quarts, muscular motions were produced to a great extent; sometimes he manifested his pleasure by stamping, or laughing only; at other times, by dancing round the room, and vociferating.

During the progress of these experiments, it occurred to him that, supposing nitrous oxide to be analagous in its operation to common stimulants, the debility occasioned by intoxication from fermented liquors ought to be increased after excitement from this gas, in the same manner as the debility produced by two bottles of wine is increased by a third. To ascertain whether this was the case, he drank a bottle of wine, in large draughts, in less than eight minutes. His usual drink, he tells us, was water; he had been little accustomed to take spirits, or wine, and had never been intoxicated, but once before, in the course of his life. Under such circumstances, we may readily account for the powerful effects produced by this quantity of wine, and which he describes in the following manner:—

'Whilst I was drinking, I perceived a sense of fulness in the head, and throbbing of the arteries, not unlike that produced in the first stage of nitrous oxide excitement: after I had finished

the bottle, this fulness increased, the objects around me became dazzling, the power of distinct articulation was lost, and I was unable to stand steadily. At this moment, the sensations were rather pleasurable than otherwise; the sense of fulness in the head, however, soon increased, so as to become painful, and in less than an hour I sunk into a state of insensibility. In this situation I must have remained for two hours, or two hours and a half. I was awakened by head-ache and painful nausea. My bodily and mental debility were excessive, and the pulse feeble and quick.

'In this state, I breathed for near a minute and a half five quarts of gas, which was brought to me by the operator for nitrous oxide; but as it produced no sensations whatever, and apparently increased rather my debility, I am almost convinced that it was, from some accident, either common air, or very impure nitrous oxide.

'Immediately after this trial, I respired twelve quarts of oxygen for nearly four minutes. It produced no alteration in my sensations at the time, but immediately afterwards I imagined that I was a little exhilarated.

'The head-ache and debility still, however, continuing with violence, I examined some nitrous oxide which had been prepared in the morning, and finding it very pure, I respired seven quarts of it for two minutes and a half. I was unconscious of head-ache after the third inspiration; the usual pleasurable thrilling was produced, voluntary power was destroyed, and vivid ideas rapidly passed through my mind; I made strides across the room, and continued for some minutes much exhilarated; but languor and depression, not very different in degree from those existing before the experiment, succeeded; they however gradually went off before bed-time.

'This experiment proved, that debility from intoxication was not increased by excitement from nitrous oxide. The head-ache and depression would probably have continued longer, had it not been administered.

The same work contains an account of many other trials; but sufficient has been extracted to show the zeal and intrepidity with which he conducted his researches. To withhold, however, the testimony which several other scientific

persons have given with respect to the intoxicating influence of this gas, would be to deprive the reader of some very amusing descriptions.

First appears Mr. W. Tobin, who tells us that he soon found his nervous system agitated by the highest sensations of pleasure, but which were difficult of description. When the bags were exhausted and taken from him, he suddenly started from his chair, and vociferating with pleasure, made towards those that were present, as he wished they should participate in his feelings. He struck gently at Davy, and a stranger entering the room at the same moment, he made towards him, and gave him several blows, but he adds, it was more in the spirit of good humour than in that of anger. He then ran through different rooms in the house, and at last returned to the laboratory, somewhat more composed, although his spirits continued much elevated for some hours after the experiment; he felt, however, no consequent depression, either in the evening or day following. Upon another occasion, he states that his sensations were superior to any thing he ever before experienced; his step was firm, and all his muscular power increased. His nerves were more alive to every surrounding impression; he threw himself into several theatrical attitudes, and traversed the laboratory with a quick step, while his mind was elevated to a most sublime height: he says that 'it is giving but a faint idea of his feelings to say, that they resembled those produced by a representation of an heroic scene on the stage, or by reading a sublime passage in poetry, when circumstances contribute to awaken the finest sympathies of the soul.' The influence, however, of this inspiring agent appears to have been as transitory as its effects were vivid; for he afterwards observes, 'I have seldom lately experienced vivid sensations. The pleasure produced by the gas is slight and tranquil, and I rarely feel sublime emotions, or increased muscular power.'

The first time that Mr. Clayfield breathed the gas, it produced feelings analogous to those of intoxication. He was for some time unconscious of existence, but at no period of the experiment were his sensations agreeable; a momentary nausea followed, but unconnected with languor or head-ache.

In a subsequent trial it would ap-

pear that he did experience certain thrillings which were highly pleasurable.

The account given by Dr. Kinglake agrees pretty much with those already cited. He adds, however, that the inspiration of the gas had the further effect of reviving rheumatic irritations in the shoulder and knee-joints, which had not been previously felt for many months.

Next appears Mr. Southey, the Laureate. The reader will no doubt be prepared to hear that the nitrous oxide transported him, at least, to the summit of Parnassus;—by no means; he laughed when the bag was removed from his mouth, but it may be fairly questioned whether this might not have been an expression of joy at the terrors he had escaped; for he freely confesses that he could not distinguish between the first feelings it occasioned and an apprehension of which he was unable to divest himself.

The first time Mr. Coleridge inspired the nitrous oxide he felt a highly pleasurable sensation of warmth over his whole frame; he adds that the only motion which he felt inclined to make, was that of laughing at those who were looking at him; a symptom as equivocal, perhaps, as that exhibited by the Laureate.

A number of other accounts are given, but those already related are perhaps sufficient to establish the fact, that the gas in question possesses an intoxicating quality, to which the enthusiasm of persons submitting to its operation has imparted a character of extravagance wholly inconsistent with truth.

It will be admitted that there must have been something singularly ludicrous in the whole exhibition. Imagine a party of grave philosophers, with bags of silk tied to their mouths, stamping, roaring, and laughing about the apartment; it is scarcely possible to conceive a richer subject for the pencil of a Bunbury. We cannot then be surprised at any terms of ridicule in which a stranger, witnessing such an operation, might describe it. M. T. Fiey   appears to have considered the practice as a national vice, and whimsically introduces it amongst the catalogue of follies to which he considers the English nation to be addicted.

[To be continued.]

Medical Zoology and Mineralogy; or Illustrations and Descriptions of the Animals and Minerals employed in Medicine, and of the Preparations derived from them: comprising their Generic and Specific Characters; English, Provincial, and Foreign Appellations; a copious list of Synonyms; Natural History; Physical, Chemical, and Medical Properties and Uses; including also a Popular and Scientific Account of Animal, Mineral, Atmospheric, and Gaseous Poisons; with Figures coloured from Nature; intended to serve as a Continuation or Supplement to the Author's and other Works on "Medical Botany" and Materia Medica. By JOHN STEPHENSON, M.D. F.L.S. To be published Monthly. No. I. price 3s. 6d. Svo. pp. 20.

WE have been much pleased with the perusal of the first number of Stephenson's Medical Zoology, and judging from the manner in which the Medical Botany of the same author was executed, we are inclined to augur very favourably of the present undertaking. The plan is to give engraved representations and letterpress descriptions of the various animals and minerals employed for medical purposes, and we have here plates of the Musk, the Civet Cat, the Stag, the Sheep, and the Beaver. These are in the best style of lithographic plates, and the corresponding descriptions are full, without being prolix:—the work is calculated to encourage a taste for natural history, especially among the younger members of our profession, and we trust it will meet with the support which it appears to us to deserve.

The Companion to Post-mortem Examinations. Illustrated by Six Plates. 12mo. pp. 24. Price 1s.

A VERY dull "companion" this. We are sometimes puzzled to discover the purpose or object of the works which fall under our notice, and this is precisely such a one. The author cannot write for fame, for he conceals his name: he must be very sanguine if he expect to derive emolument from the sale of his *brochure*, and humble indeed must be his estimate of medical knowledge if he can hope that his pre-

sent contribution is calculated to advance it. We have six lithographic plates—faint, inaccurate, and confused; the heads, for example, in Plate I. are such as never appeared on any shoulders, unless those of some monster, and in fact we turned to the description to see what malformation or morbid development they were intended to represent, when, behold! we found that they were supposed to be the heads of ordinary men, laid open to shew the changes produced by inflammation. The letter *b* is placed opposite a point where nothing of any kind whatever is discernible but the white, unstained paper, yet in the letterpress it is marked "pus and coagulable lymph"! This is drawing somewhat too much on our imagination. The plates, we are told, are all from "actual" preparations, and we are quite sure that no one who sees them will for a moment question their being *original*.

The entire work extends to only 24 pages, duodecimo, yet the compilers refer to 92 authors, besides "Medical Journals" (which, we suppose, may fairly be reckoned at half as many more—without allowing any thing for two *et cetera*,) whose text is illustrated by their labours!!! *Parturiunt montes*—&c.

CASES ILLUSTRATIVE OF VARIOUS DISEASES OF THE NERVES,

From MR. BELL's work on the Nervous System.

CASE I.—Disordered Action of the Muscles of the Neck.

A GENTLEMAN came this morning to consult me on account of a painful and spasmodic condition of the muscles of the side of his neck.

About twelve months ago his mind was exceedingly harassed, and to this he attributes his present symptoms. His countenance betrays want of general health; his stomach and bowels have required attention. He has been consulting the usual fashionable round of medical gentlemen. He has taken five grains of the blue pill at night for some time. His complaint is a wry neck. The position of his head is not constantly awry. He can turn it in all directions, but at times (and I think while conversing with me) his head is gradually and by little and little turned round,

until his right ear comes near to the sternum, and the chin is pitched upwards, and to the left side. The sterno-mastoideus is of Herculean strength, and when you grasp it in its state of action, it is as large as the biceps of a powerful man.

The contractions extend to the muscles of the neck and shoulder, corresponding with the distribution of the *nervus accessorius*, or superior respiratory. I made him strip, but could not observe that the serratus magnus was at all affected.

In this case we have an affection of a respiratory nerve, distinct from the common voluntary nerve, and bearing an analogy with the more common instances, because more observable ones, of the affection of the *portio dura* in the face.

CASE II.—*Spasmodic Action of the Sterno-cleido Mastoideus, producing a continual Motion of the Head.*

Anne Turrell, aged 19. Northumberland ward.—This young woman received an injury of the chest. The blow was so severe as to break the bone of her stays, and was followed by spitting of blood. The treatment necessary for this complaint brought her very low. She describes herself at this time as oppressed with a heaviness and numbness of one side of her head and face, and having the sensation of cold water poured down her neck. This continued until the commencement of this singular motion of the head, which is the most remarkable symptom in her complaint. Conceiving this condition to be an effect of weakness, she left the hospital into which she was first received. From that time, however, until she came into the Middlesex Hospital, the motion of the head has continued.

“There is a perpetual rolling of her head night and day. It was first noticed whilst she was in bed, by a patient who lay near her. The head turns twenty-two times in the minute. The action producing this rolling motion is in the sterno-cleido mastoideus, trapezius, and splenius muscles, first of the one side and then of the other, so as to move the head on the tooth of the dentata as regularly as if it were swung round by a pendulum; and this continues night and day. Her breathing appears to be perfectly easy; there is deafness in the

right ear, and a degree of lassitude in the right side.”

This young woman continued an object of interest for some months, her complaint being principally referred to her stomach. She was at length seized with an attack of hæmorrhage from the lungs. She was repeatedly bled, and consequently reduced low, and became hysterical.

But what was remarkable, was the amendment of this motion in the head under the general debility. The motions became quicker, and the rotation to a less extent, like the diminished oscillation of the pendulum, from being shortened; and when in bed asleep, the motion ceased. Another attack of hæmoptysis succeeded; but, notwithstanding, the affection of the muscles of the neck diminished. She was made an out-patient; and in a few days after I saw her visiting her old friends in the hospital, entirely free of the unnatural motion of the head which had so long distressed her, and in high spirits.

It has been observed, that in this case the spasmodic motion reached the muscles on the side of her neck, and that there was a weakness of one side. I am not, therefore, authorized to affirm, that the complaint was seated in the accessory nerve; nevertheless, it is my belief that it was so, and that it is the susceptibility of this nerve which makes the sterno-cleido mastoideus muscle so frequently the seat of those deranged actions.

CASE III.—*Spasmodic Contortion of the Head and Neck.*

Mary Preston, aged 19.—This young woman was brought from the physicians' ward into mine, that I might have more frequent opportunities of studying her case.

“The sterno-cleido mastoideus, and the trapezius of the left side, are subject to almost continual actions, which twist her down to that side; the ear is brought near to the shoulder, the head turned round, and the chin pitched up, whilst the shoulder is elevated, and the body bent. These violent actions are attended with considerable pain.

“The actions of the muscles are not constant nor regular. The violent contractions come at intervals. The sterno-cleido mastoideus first comes into action, drawing the head forwards and downwards; then comes the trapezius,

twisting the upper part of the trunk, and carrying the shoulder to the ear.

"This has continued, for longer or shorter intervals, about eighteen months. It began by slight degrees. She first perceived that she had a drawing of the head towards the shoulder, with little pain, and slight inconvenience. Previous to this attack she had been delivered, after a severe and protracted labour. She is now obliged to support her head with her hands, otherwise it is drawn completely down to her shoulder. She complains of pain in the head, which is attributed to the continual action of the two muscles."

I am often obliged to cease conversing with her, and to draw off the pupils from the ward, seeing that her anxiety increases the violence of the spasm. I ordered to this patient a soft-stuffed collar, to be put round the neck, on which I hoped the head might rest, and save her from the necessity of carrying her head, as it were, continually in her hands, which was a thing painful to witness. But no support or control by bandage could be borne.

When first brought into the surgeons' ward, she was found to have scarlatina; after this I thought I had got some indication, in her vomiting three *lumbrici*. After a course of worm medicine, she had an attack of continued fever; and it was necessary, in her debilitated state of health, to send her out of the hospital.

Is it too much to ascribe the affection of these muscles to their strain in the act of delivery? Nerves are over-exerted by violent actions, as much as muscles are over-strained. I have known the shoulder of a little girl fall quite down, in a temporary palsy of the muscles which support it; and in that case it was presumed to be owing to an over-strain. We are quite in the dark as to the particular nature of the disturbance in the nerve. Apparently from the same cause we see a class of muscles become suddenly paralytic, or subject to occasional twitchings, or to violent and continual actions, by which they are inordinately increased in strength.

I think the reason of the obscurity in these cases will be apparent to the reader. It is not the muscle properly which is diseased, but the nerves: and it is not all the nerves of the muscle, but only one class, which is the reason why the muscle is so strangely and spas-

modically contracted, whilst it is still under the influence of the symmetrical voluntary nerves. The muscle being an engine moved by two distinct powers, and one of these only being deranged, is the reason of the difficulty in comprehending the case.

CASE IV.—*Affection of the Respiratory Nerves on the Side of the Chest.*

— æt. 50.—We have not met with a more distinct case of affection of the respiratory nerves of the side, than is now presented to us in this patient. The following is a description of his condition:—

"If he attempt to lie upon his left side in bed, his head is lifted from the pillow by a rapid succession of contractions of the muscles upon the right side of his neck and right side of his thorax; so that, instead of lying at rest, his head and shoulders are raised from the pillow, and the upper part of his body forms a curve. These contractions are attended with pain, and this pain he cannot otherwise describe than by saying it is like a cramp. When he lies upon his right side he is more at rest, the weight of his head and shoulders counteracting the contraction of the muscles, and keeping him in some degree steady. On being asked whether these contractions disturb him during his sleep, he says he is sensible of their diminution as he is dropping asleep. When he sits up, the head is gradually drawn to the right side, and there is an obvious contraction of the right side of his neck. The sterno-cleido-mastoidæ swells, and the trapezius is very distinctly in action; so that the ear is drawn to the shoulder, and the whole body becomes bent, and the head approaches to the side. In this state the pain he suffers is seated behind the mastoid process and at the acromion scapulae, that is, at the origin and insertion of the sterno-cleido-mastoidæ muscle and the insertion of the trapezius. He complains also of the pain and spasm striking from his back to the scrobiculus cordis, as if the diaphragm were affected. He also complains of a pain which is seated in what he calls his 'swallow;' that is, a spasmodic affection of the throat accompanies the affection of the external muscles, but he has no impediment in swallowing.

"When we say to him, 'what, sir,

cannot you hold up your head at all?" he makes an exertion and sits upright, suppressing his breath. But when he speaks, his head begins to descend towards the right side by a succession of little movements, until he is quite bent down as before described. When we attempt to hold his head towards the left side, we see the sterno-cleido-mastoids in violent action on the right side, and the muscles of that side are powerful so as to overcome us. When we hold the head down to the right side, he can pull against us with the muscles of the left side: he has the voluntary power of these entire, but they are not so strong as the muscles of the right side; it appears that by use the muscles of the right side have acquired great volume and strength. At first one might imagine that there was paralysis of the muscles on the left side. But we find that it is not the ordinary contraction of the muscles of the right side of which he complains, but of a violent spasmodic and painful action. That there is no paralysis is obvious from this, that he can move his head to either side, twist round his mouth either towards his left or his right ear, turn his head in any way you choose, and raise his right or his left arm equally, throwing them over his head: all these motions he can perform when the spasm is not upon him. When it does come on, then the muscles of the right side only are affected with contractions, and those of the left side are perfectly relaxed.

"Twenty months ago, he says, he was raising a crow-bar, and he felt something snap at the upper and back part of his neck (and he puts his finger to the posterior insertion of the sterno-cleido-mastoid muscle). He does not say, however, that he felt pain at that time. A month after this he began to have pain, and still he points to the same place, the back part of the mastoid process. The pain has gradually increased with the violence of the contractions; and, as we before said, the pain is like that of a cramp, and there is no pain in the intervals of spasmodic action."

Although the source of this complaint be obscure, yet it is a stage in the inquiry to ascertain that the spasmodic contractions are confined to the influence of the respiratory nerves of the trunk of one side. And indeed without

the preceding account of the nervous system, the contractions here contemplated must have remained among the very great variety of nervous symptoms, which, owing to our indolence, are yet presented to us as mere accidents of nature, which it is not expected we should investigate. It would appear that this man's condition has been produced by the violence of exertion. We have learned that in violent efforts to lift weights, the muscles of inspiration are brought into aid of the merely voluntary act; and I have many cases to show that violent exertion or long excitement of nerves, and continued exertion of particular classes of muscles, are followed sometimes with paralysis, and sometimes with irregular minute spasmodic contractions, which are very distressing.

CASE V.—Illustrating the Difference between the Respiratory and Voluntary Nerves.

Mr. —, surgeon, and a West-Indian, called upon me to hold some conversation on his own case. He attributed his unhappy condition to a malignant fever, with erysipelas, during which there had been exhibited a great deal of calomel, as much as thirty grains at one dose, which cured him; but he thought it left him subject to a gastric affection, with chronic inflammation.

However that may be, this is his present condition. On falling asleep, just at the moment when volition and sensibility cease, the involuntary motions also stop, with a sensation of death, under which he awakes generally convulsed.

His medical friends have sat by him and watched him, and they have found that when sleep is overpowering him, the breathing becomes slower and weaker, the heart and pulse also fall low, and cease to beat as sleep comes on, and after a short time he awakes in tremor.

This gentleman is very naturally in much apprehension that some of these attacks may terminate existence. But he is young, and I think the attack is essentially different from the case of angina pectoris. The case presents to us a lively idea of what would result, were the involuntary nerves subjected to the same law with the nerves of sense and volition, for then sleep, by overpowering both, would be death!

CASE VI.—*Spasmodic Action in the Sterno-cleido-mastoideus and Trapezius Muscles.*

Mr. D. a farmer, 58 years of age.—The first appearance of this patient was characteristic. He walked past me to the further corner of the room, and standing there upright, and with his head as it were forced into the corner, he began to speak to me. He said his complaint commenced with a lowness of spirits, accompanied with a pain and weight at the back of the head, and down the shoulders; and this he particularly felt when riding on horseback. At this early stage his head was not pulled down, although his friends observed that it was a little awry. This was four years ago; it is about a year since he began to feel the pulling upon his head. He feels now as if a weight pulled it down; and to keep himself tolerably easy he must hold his head with both his hands. When he sits upon a chair he throws his head over the back of it, in such a manner as to make the weight of it counteract the pulling on the muscles of the neck. When he stands up and allows the muscles to have their influence, the occiput is turned to the right shoulder, and drawn down to it; and of course if you are standing before him, you see his profile with the chin to the left shoulder and pitched up. He has pain, especially in walking, across the ribs on the right side, and this is attended with a catching and shortness of breath; and he describes it by saying, it is hard work walking; and he draws his fingers along the attachments of the serratus magnus to the ribs.

If you put your hand broad upon the side of the neck whilst the head is pulled down, you feel a powerful action in the trapezius muscle. The sterno-cleido-mastoideus is also in powerful action, that is to say, the sternal portion of it; and a strong cord of the trapezius, and of this anterior portion of the mastoideus, may be felt as they act in rapid succession, rolling the head in a singular manner, at the same time that it is pulled down. He complains of a pain just under the tubercle of the occiput, and on the ligamentum nuchæ. He describes a sensation of catching on the left side of his face.

When he coughs, there is neither increase nor diminution of the spasms. Being asked as to this point, he observes, however, that on the moment of

swallowing a morsel, the pulling of the neck is brought on. When fatigued, he rises and stands in his present position, with his head and left shoulder resting against the wall, his feet at some distance from the wall, and his heels off the ground; and thus his body forms an arch from the feet to the shoulder. This patient was attended by Mr. Heelis, of Limehouse.

PARIS LETTER.

Prospect of Tranquillity among the French Students—Petition of the Private Professors—Meetings of the Academies of Science and Medicine—Cholera—Hermaphrodites—New Living Skeleton.

To the Editor of the London Medical Gazette.

Paris, Jan. 12, 1831.

SIR,

I KNOW that, on more than one occasion, I have been deceived in my estimate of the character and conduct of the French students—I have always been disposed, I do admit, to put rather too much faith in their good sense and love of order: but the mistakes I may have made in this respect will render me more cautious in future, and of course more trustworthy. My present impression is, that I shall be perfectly justified in saying that the late disturbances and discontents are decidedly on the wane; the political agitation which for some months so deplorably interrupted the progress of science, now gradually subsides, and tranquillity and hope begin to revive. To this much-desired consummation there can be no doubt but that the gentle hint conveyed to those youths in the letter of M. Barthe will have mainly contributed. In that document, which issued only yesterday from the bureau of public instruction, and which is posted up this morning in various parts of the city, the minister politely praises the late heroic bearing of the students, in the affair of "the three days," but expresses himself doubtfully upon their later conduct; and reminds them of that especial ordinance (5th July, 1820) which strictly forbids them "to form among

themselves any association, or to act or to write in a collective capacity, as a corporation or association legally recognized;” otherwise, that proceedings will be taken against them, and they shall be held liable to the penalties for infringement of discipline determined by certain clauses of the said ordinance: in conclusion, he informs them that his duty is to have the law properly executed, but “he trusts that *this warning* will be sufficient for the loyal youth, who will not be disposed to be hurried away by the influence of passions which pay no regard to the future.” This is justice tempered with genuine discretion, which has ever a far better chance of procuring a settlement than prosecutions followed up with stern rigour. Even already the good effects of it are visible, and a brighter prospect begins to dawn.

There is still, however, one question that remains to be settled—one that may create some dissatisfaction before it is set at rest. I mean the affair of the private professors. Should the present arrangements of the *Ecole de Médecine* continue, many of the most able and deserving teachers will remain destitute of the means of conveying instruction in any sort of an efficient manner: the interests of MM. Ribes, Magendie, and others, will suffer most materially by such management; but we can scarcely believe that it will be persevered in. The *Ecole* must yield ultimately, at whatever sacrifice of emolument to the accredited teachers; the force of public opinion is entirely too strong to allow it to be otherwise. What can be more clear than the late ordinance (5th Oct. 1830), which took from the *agregés* the monopoly of teaching?—yet, by a most unfair piece of management, it is still preserved to that class almost exclusively. No more than two of the amphitheatres of the *Ecole* will be suffered to be employed, and business is permitted to be carried on in them only at stated hours. Then the order of precedence, according to which those places of instruction are given up to the recognized teachers, acts almost as an order of exclusion against many of the eminent men to whom I have alluded. I have now before me a copy of the petition which has lately been addressed by the latter to the Minister of Instruction. The petitioners, after setting forth the great

advantages to be derived, and which have been derived, from private independent schools (a position not necessary to be dwelt on in England, but which, even in France, is strongly supported by the experience of the last forty years—in the last twenty of which there has been a palpable falling off in the study of anatomy, while the former twenty was the illustrious era of the Dessaults, Bichats, Du Bois, Boyers, &c.), pray for the restoration of that liberty which was enjoyed in the time of Bichat—a liberty which is imperiously demanded by the spirit of the age: they offer at the same time to make themselves responsible in any required way; they are ready to submit themselves to the surveillance of the police—to apprise the Prefect, in every individual instance, of the locality in which the teacher wishes to establish himself—to limit themselves to the supply of subjects furnished by the hospitals, work-houses, and prisons (and, by the by, there is a great scarcity of subjects complained of just now in the French metropolis)—and, finally, to give notice of where they intend to deposit the *debris* of their dissecting-rooms. It is hard, one should think, to form anticipations unfavourable to the success of this petition; yet the influence of certain persons connected with the management of the school is undoubtedly very great, and we dare not be too sanguine.

Business goes on briskly in the Institute. The much-mooted question of cholera begins to be quite a bore at the sittings of the Academy of Science: I have scarcely visited the Academy once within the last three months that I have not heard more or less about the ravages of cholera in the Russian states, and the necessity of sending out French physicians to those regions, for the purpose of observing the nature of the epidemic; and no necessity can possibly be more urgent, if we were to believe the would-be missionaries. It is curious enough that these gentlemen do not make application to the Academy of Medicine, instead of to the former academy. Is it because their *merits* are better understood in the one than in the other, or because the section of medicine is less rich than that of the sciences? The answer is not difficult, and men of observation smile at the whole proceeding.

In the Academy of Medicine there is

sure to be something interesting at every sitting; and now that the presidency has devolved upon M. Adelon, *vice* M. Double, the business is likely to proceed with more satisfaction to all parties. I was present a few days ago, when M. Bally communicated to the meeting one of the most curious cases I have for a long time heard: it was the case of a man who died under circumstances nearly allied to those of spontaneous combustion; but I have not room for particulars in my present letter—they must be reserved for the next. M. Dupuytren, too, a short time ago made, in my hearing, a curious report to the Academy of a case of apparent hermaphroditism. It was that of a person, 22 years of age, enrolled in the government registry as a female, and called by the name of Josephine. At 15, the sex of Josephine was looked upon by all men as decidedly female; but at 17, the habits and propensities of the male creature began to be developed, though it was not till the age of 20 that it put on the outward garb of man. In the course of a conversation which arose on the subject of the actual existence of true hermaphrodites, M. Dupuytren ridiculed and scouted the notion; and, as an instance of how little dependence is to be placed on the articles exhibited in the museums of certain establishments, he mentioned the fact of his having had under his care, in the Hotel Dieu, an hermaphrodite (so to speak), who was married to a man. The person died; and at the autopsy the artist who came to model the parts of generation persisted, in spite of every remonstrance, to represent, purely from his own invention, the ovaries and uterus. So much for wax-modelling, and the veracity of artists.

There is a new *anatomie vivante* at present in Paris. I went to see him the other day, and an extraordinary sight he is. Only think of a man of forty-two measuring in height 5 feet 3 inches, and weighing not more than 4 stone (or 56 pounds) English—a most pitiable object altogether, though he affects to possess some muscular force, and is reputed to have been the father of four children, three of whom are living, but in too good case to be easily looked upon as the offspring of so miserable a wretch.

Yours ever, faithfully,
ANGLAIS.

MEDICAL GAZETTE.

Saturday, January 22, 1831.

“*Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso.*”—CICERO.

IRISH COLLEGE OF SURGEONS.

THE strong degree of attachment which some men exhibit for the party of their adoption, or rather for the party which, from whatever motive, (always, however, flattering to the vanity of the new proselytes,) has adopted them—the zeal with which they advocate, at all hazards, the interests of that party—and the degree of earnestness which they contrive to throw around their services in this way, almost deceiving others as they in most instances deceive themselves, were beyond all calculation—all *a priori* supposition—all belief—did not every day's experience supply us with examples of the phenomena to which we allude. It would be impertinent in us to assume the office of the moralist, and, at this immediate period of the world's history, to point out to the notice of any class of readers, however little accustomed to such subjects of consideration, the imbecile opinions—the rotten causes—the improbable fictions, called facts—the gross absurdities—which take possession of the minds of some men, who would otherwise appear to enjoy the unbiassed use of their reasoning powers. Much less is it our province to determine the wise ends for which prejudices of this description are, more or less, found to be inherent in most men's minds. It is more to our purpose to observe, that those party feelings to which we advert, have not their immediate origin so deeply seated as in the first principles of human nature; for they are evidently adopted, in the first instance, from the exertion of an instinctive self-

ishness;—but what we find most to be admired in them are, the pertinacity and the vulgar effrontery with which they are entertained, as well as the effect which they have in operating upon the minds of their defenders, converting, in most instances, the impressions of the hired advocate into those of the unaffected and genuine believer.

This easy inculcation of new impressions, and sly conversion of bitter opponents into warmest advocates, would be in general truly amusing, were they accompanied, on the part of the converted, with the modesty, or at least the regard to public decency, which such violent and palpably inconsistent changes would seem to require. But it is just the reverse; it is perfectly loathsome and offensive to see those men “standing up in their places,” glorying in their shame, bronzed to all sense of delicacy, and steeled against the influence of public opinion, endeavouring not only to gloss over the causes of their change, but to prove, with coarse dogmatism and vulgar violence, that the party whose interests they have last espoused is the right one—and even perfection itself. It is some consolation, however, that instances of this sort are rare, though they certainly do sometimes occur.

The abusive letter of Dr. Jacob, which we animadverted upon in our last week's Gazette, and the object of which we in part explained, will not have escaped the reader's memory. Those who recollect some periods in that gentleman's career, will be able to say what mutations his opinions on certain subjects have undergone within even a comparatively short period, and to assign, without difficulty, certain very obvious reasons for them; and they will, perhaps, be also able to say, whether any, and how much mutation has taken place in the gentleman's manners, and delicate mode of expressing himself, since

his new way of thinking has been adopted. We, in our public capacity, cannot immediately take cognizance of these things; we are satisfied, without prejudice, or either personal pique or partiality, to try each cause as it comes before us, out of the face of the record; and it is purely in this spirit of indifference to favour or affection that we approach the consideration of the present topic.

If we were to put our faith in the flattering report of Dr. Jacob, the Irish College of Surgeons is a perfect system—verily, an Utopian republic, that might satisfy the most ardent assertor of the perfectibility of human institutions.—“Now, sir,” says the doctor to our cotemporary, “you are, I believe, a radical reformer, and an advocate for universal suffrage, and annual parliaments, in Lincoln's Inn Fields. We, in Stephen's Green, Dublin, enjoy those blessings of universal suffrage, and annual parliaments, and vote by ballot too; *therefore*” (here he evidently has our consistent cotemporary placed between the horns of a dilemma), “if the statements respecting the inefficiency, dishonesty, and depravity of the Irish College be correct, it is a conclusive argument against the system, at least in this country;” (and we say, *en passant*, that if the doctor has not stronger evidence against those statements than the presumptive purity of a system governed by such unconstitutional principles, he must inevitably concede the fact of their correctness, though they scarcely require this additional proof, as we shall presently see.) “The fact is,” continues the learned advocate, “that the constitution of the Irish College is as purely democratic as the most ardent admirer of free institutions could desire.”

Now, without venturing to express an opinion in this place on the superior advantages of one form of government

over another, or whether a pure democracy, such as we have here described, is all that is to be wished—all that is to be held sacred and inviolable—by the jealous observers of the fitness or unfitness of the medical schools (for the Irish College is little more than its school of surgery) which the sister kingdom presents to public patronage—without going quite so deeply as into the constitutional form of the establishment in question, we shall be satisfied with a simple view of the effects of the system; we wish to see how it works, and what may be the beneficial results which accrue from it to the community at large.

And the first result is one which is universally complained of—the undue protection of apprenticeships, even under the better-intentioned, or at least better-pretended, provisions of the new charter. Our readers on this side the channel are, perhaps, not sufficiently aware of the fact that the College of Surgeons in Ireland constitutes the chief school of surgery in that country; that it not only has the privilege of arranging what education the candidates for its honours must receive, but that it professes to be the fountain-head of surgical education, and that the conductors of the school just mentioned, its partners in trade, its professors, and its managers, are the leading and influential personages in the College Council. Moreover, there was a time, and that time continued from the first foundation of the College until within the last two years, when no man could presume to look for the license of the body unless he had served an apprenticeship to one of its members. But “a change came o’er the manner of their dream;”—the public grumbled and grew indignant at the gross monopoly—and public opinion prevailed. A new charter was reluctantly sought for; it was readily and gladly conferred, for it had the semblance of liberality about it—it professed “to throw the College

open,” and to announce that apprenticeships were no longer required. And who, cries Dr. Jacob and his party, who says the College is *not* thrown open, or that apprenticeships *are* required? Ask the shoal of Irish students who are obliged to seek for that in Lincoln’s-Inn-Fields which the structure in Stephen’s Green will not allow them. And the very first manifesto put forth by the College, in the shape of an “Extract from the new By-Laws,” sufficiently explains the reason. In that document, though a course of study is laid down for the apprenticed and non-apprenticed candidate, the advantages so clearly lie on the side of the former, that no prudent person, intent upon passing the Irish College, could halt for a moment between two opinions. Thus, by a happy contrivance, has the newly-chartered body managed, with professions of liberality, to keep their doors closed, and to escape the performance of those engagements which the public good and public opinion so imperiously demanded of them.

But we perceive that Dr. Jacob promises to discuss, in another letter, “some of the long-disputed points respecting the system of management” to which our remarks are directed. Perhaps, then, it were as well to suspend our further judgment until this epistle arrives. We profess to be perfectly unbiassed and open to conviction on the subject; and we shall read with great pleasure whatever the Professor has to offer upon it, provided he can only restrain himself from heaping coarse and vulgar abuse upon all who entertain opinions different from his own.

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ABOLITION OF LATIN EXAMINATIONS.

THE custom of examining, in the Latin language, candidates for medical degrees and licenses, has been abolished, by a late regulation of the faculty in

Dublin. This important step (out of the trammels of old and absurd prescription) has been taken, not only by the College of Physicians, but by the University in that city: in the latter, we understand, chiefly through the instrumentality of Dr. Macartney and the new Regius Professor of Physic, Dr. Whitley Stokes. Our opinions regarding the propriety of this arrangement are already on record *; but we shall, perhaps, find room for some additional remarks upon the subject in our next number.

COLLEGE OF PHYSICIANS.

THE evening meetings at the College of Physicians will commence on Monday, February 1st, and be held subsequently on the last Mondays of February, March, April, May, and June. On the first evening the paper of the learned President will be read.

MEDICAL JURISPRUDENCE†.

Regulations of the Royal College of Surgeons of Edinburgh.

ON the 16th of November last the Royal College of Surgeons of this place passed a resolution, enjoining all students who shall, after the 1st of August, 1831, commence their curriculum of study for the diploma of surgeon, to attend a three months' course of lectures on medical jurisprudence. This science has at length obtained from most of the bodies which preside over the education of medical students the full attention to which we have long considered it entitled and laboured to procure for it. In the autumn of 1829 the Royal College of Surgeons of Dublin, in the course of last autumn the Society of Apothecaries in London, and now the Royal College of Surgeons of Edinburgh, have all rendered attendance on a course of lectures on medical jurisprudence imperative. A few years earlier it was recommended to the notice of the graduates of this university by an optional statute, which

requires candidates for the degree to attend any two of five specified classes, medical jurisprudence being one. The senatus, we hope, will now see the necessity of going a step farther, and adhering to a provisional resolution, passed before an overwhelming majority recently before the enactment of the optional statute,—by which resolution candidates were required to attend this class absolutely. We need scarcely call the attention of the public to the zeal which the Edinburgh College of Surgeons have shewn to improve and perfect their scheme of medical education. Notwithstanding the recency of their last extensive changes, a very general feeling prevailed among the members that the subject of medical jurisprudence was on that occasion improperly passed over; and it has been now introduced with scarcely any opposition. We have great pleasure in adding that the expectations of the promoters of an improved system of medical study for surgical pupils have not been disappointed, and that the number of surgical pupils continues as great as ever; for the number of inscriptions of first year's students during the session of 1829-30 (the first year when the new regulations passed in 1829 came into operation) was as great as during the previous session.

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

LA CHARITÉ.

Vascular Tumor of the Radius—Mode of applying Ligatures adopted by M. Roux.

A MAN, aged 36, of good constitution, and whose occupation was that of a servant, became affected, six months ago, with a tumor on the right wrist, which continued gradually to increase, though without causing any great pain. He was admitted into La Charité Nov. 10. The swelling then occupied the circumference of the inferior extremity of the fore-arm, projecting most at the outer edge. Moderate pressure gave no pain. Examination communicated to the surgeon an obscure sense of fluctuation, which might have led to the idea of an abscess; the skin was slightly red; the neighbouring veins distended; and the radial artery beat superficially. As some difficulty was experienced in deciding upon the exact nature of the tumor, it was thought expedient to make

* See Medical Gazette, vol. v. p. 217.

† Edinburgh Medical and Surgical Journal,

subject to pulmonary disease, was brought into the London Hospital this day, with complete paralysis of the lower, and partial paralysis of the upper extremities; he had fallen into a sand pit, a depth of six feet. On examining the spine, there was a slight irregularity perceptible in the situation of the fifth and sixth cervical vertebrae. Breathing rattling; priapism; perfect retention of urine, and obstinate constipation; eyes had a peculiarly glassy appearance. Slight extension of the spine was tried without benefit; the urine was drawn off by a catheter; five grains of calomel, and a drop of Croton oil, were administered without any motion being procured; he was also bled from the arm, but his breathing became more laborious, his pulse sunk, and he died at 3 p.m. the same evening.

Oct. 10th, 12 A.M. *Dissection.*—Dura mater firmly adherent to the skull, rather thicker than natural; its veins turgid.

Tunica arachnoidea in some parts opaque, and universally separated to the twelfth of an inch from the pia mater by air. Air also in the vessels of the pia mater. Brain itself firm; a large quantity of serum in the case of the cranium. Lungs healthy, but gorged with blood.

Abdominal viscera healthy.

Muscles in the course of the spine much lacerated; a good deal of extravasated blood in that situation. The fifth cervical vertebra completely separated from the sixth; all the ligaments posteriorly torn; the anterior part of the column thrown to the left side and forwards, so that the spinous processes of these vertebrae are full three times as much apart as the others, leaving the medulla at this part exposed; the sheath ruptured; the spinal marrow at this part softened, and blood extravasated into its structure. No fracture.

Aortic Aneurism bursting into Lung.

July 26th.—John Jackson, æt. 41, a sailor, was admitted into the London Hospital on the 12th inst. He stated, that about three months previous to his admission he fell down on board a ship, and bruised the left side of his chest; shortly after which, he had a severe hæmoptoe, coughing up sometimes as much as a quart of florid blood in a day. Looked very ill, and was very feeble upon his admission. Had pain in the left side, and dyspnoea; spits up, at times, a little dark clotted blood; no respiratory murmur on the left side; puerile respiration on the right side. He was bled, and took digitalis, which seemed to relieve him for a few days, his pain ceasing with very little bleeding. The hæmorrhage, however, again returned copiously yesterday, and he was again bled from the arm and took a grain of the acetate of lead; which was repeated without any benefit, and he died at 5 p.m.

Dissection.—Upon exposing the chest, the right lung was enormously distended with air, perfectly healthy, and unadherent; about 5vi. of serous fluid, tinged with blood, in this side of the chest. The left lung adhered every where to the pleura costalis, and upon further examination it appeared that the whole lung was destroyed, and the pleura pulmonalis completely filled with coagulated blood; the pleura thus forming an aneurismal sac connected with the arch of the aorta, in which there was a circular hole the size of half-a-crown. The coats of the artery healthy.

Enlargement of the Liver extending into the Pelvis, Hydatids, Fistulous Opening from the Gall Bladder into the Bronchi.*

Sarah Manning, æt. 35, widow, had never borne children, was lately admitted into the London Hospital under the care of Dr. Billing; had complained for three years of dry cough and pains in the right hypochondrium, without much disturbance of general health, until within two months, when the cough increased with pain extending up into the chest; at that time a tumor pointed and broke, half-way between the umbilicus and cartilages of the ribs in the right hypochondrium, and there is still a fistulous opening, from which a yellowish serous fluid escapes; she is jaundiced, and expectorates a large quantity of a frothy, thin, purulent-looking matter; she is perpetually harassed by cough producing retching, and constant rejection of her food; there is mucous rûle, and bronchial respiration in the inferior part of the right side; she feels less oppression of the chest, when the opening in the side discharges freely; pulse moderate, tongue clean, skin soft, much emaciation; there is a solid tumor in the situation of the liver extending down towards the pelvis.

The treatment consisted chiefly of mild tonics, and nourishment to support strength.

In a few days two or three membranous shreds (hydatids) the size of large grape skins, were discharged from the opening in the side, and she now mentioned that she had expectorated the same kind of substances. She gradually sunk from emaciation and exhaustion, without any urgent symptom.

Sectio Cadaveris.—Upon opening the abdomen, the liver occupied all the cavity down to the pelvis, into which it had thrust the intestines (this appearance was increased in consequence of the waist of the woman having been unnaturally compressed by the tightness of her dress); it was not much increased in bulk, but elongated; the lower part of it presented a large tumor, very elastic, the size of a man's fist, containing one hydatid about three inches in diameter,

* This case is taken from the Med. and Surg. Journal.

which had no young ones within it, but several granulations attached to the inner surface. The gall-bladder formed another tumor, stuffed with skins of dead hydatids, such as had been discharged through the opening in the abdomen, and a director was then passed upwards from the gall-bladder in the fistulous channel, through the diaphragm, and through the lung into one of the large bronchial tubes, which was wider than natural, thus forming a passage from the gall-bladder to the trachea wide enough to admit the point of the little finger; the gall duct into the duodenum was not obstructed. The other viscera were healthy.

SUBSCRIPTION FOR THE FAMILY OF THE LATE DR. NUTTALL.

To the Editor of the London Medical Gazette.

SIR,

THE friends of the late Dr. Nuttall will feel an increase of obligation by your publishing in your journal the list of subscribers for the widow and children of the deceased. We are grateful to all who feel interested in our cause. Supported as we have been, we cannot fail to succeed.

I trust the medical profession will follow the example set them by Dr. H. U. Thomson, of Piccadilly; whose zealous exertions among his patients and friends prove him to possess great sympathy for the unhappy survivors.

The Trustees are, the Rev. Mr. Stevens, 15, Huntley-Street; Dr. Lee, Half-Moon-Street, Piccadilly; Dr. Macleod, Henrietta-Street, Cavendish-Square; Mr. Robertson, 34, Gerrard-Street; Mr. Tucker, 16, Howland-Street.

I have the honour to remain, sir,

Your obedient servant,

J. H. TUCKER.

16, Howland-Street, Jan. 17, 1831.

Subscriptions received for the Widow and Orphans of the late Dr. Nuttall.

By Mr. Robertson, 35, Gerrard-Street :

	£	s.
Sir Richard Hunter	25	0
James Kinlach, Esq.	10	0
James Newman, Esq.	5	0
H. C. Christian, Esq. Strand	5	0
J. R. Snow, Esq.	5	0
J. A. Atkinson, Esq. Gerrard-Street	2	2
W. Blew, Esq.	2	0
A. C. Hutchison, Esq. Surgeon	1	0
Mr. Wade, Surgeon, Dean-Street ..	1	0
Mr. Hobbs, Mortimer-Street.....	2	2
Mrs. Chas. Turner.....	1	1
Mr. Moorby	1	0
Mr. Robertson	5	5

By Messrs. Hammersley and Co.

Bankers:—

	£	s.
J. W. Robins, Esq. Surgeon	5	5
Hugh Barclay, Esq.	1	1
Dr. Carter.....	1	0
Mrs. C. Willyans ..	1	0
Miss Willyans	1	0
Miss Snell.....	3	0
J. P. Plumptre, Esq.	5	0
D. Dashwood, Esq.	1	0
Mrs. Lyford ..	1	0

By the Rev. Mr. Stevens:—

— Warren, Esq. Kentish Town	10	0
Mrs. Warren.....	10	0
Miss Steers	10	0
Mr. James Steers	5	0
A Friend, by Mrs. Warren	2	0
A Friend, by Ditto	1	0
The Lancet	5	5
J. S. Stacker, Esq. Surgeon, Sidmouth ..	1	0
— Devonall, Esq. Surgeon	1	0

Editor of the Medico-Chirurgical Review—Dr. James Johnson

By the London Medical Gazette:—

Mr. Moss, Surgeon, Eton	1	1
Dr. Conquest.....	5	5

By Mr. J. Wilson, Medical Bookseller:—

T. Copeland, Esq.....	5	0
Dr. Bisset Hawkins	1	0
Dr. Ashburner ...	1	0
Mr. John Wilson	5	0

By Mr. Tucker:—

H. Leigh Thomas, Esq. Leicester Place ..	5	0
Dr. Le Mann	2	0
Dr. Macleod	2	2
— Lambert, Esq. Surgeon, Dean-Street	1	0
— Humby, Esq. 69, Norton-Street ..	5	0
A Widow's Mite, by ditto	0	5
Mrs. R. a late patient	1	0
Mrs. Smith	1	0
A Friend, by ditto.....	1	0
Mr. Rippon	0	10
Mr. Dixon.....	0	10
W. N.	0	5
J. S. T.	0	5
H. W. A., Brunswick Square	0	10
R. Wheeler	0	10
— Woodford, Esq.	0	10
H. W. Thomson, M.D. Piccadilly ...	5	5
A Lady, by ditto	10	0
Miss Fryer, by ditto ..	10	0
Mrs. C. Williams, by ditto	3	0
Mrs. Dimsdale, by ditto	5	0
Charles Summers, Esq. by ditto	1	1

✍ We shall be happy to take charge of any subscriptions, but we cannot insert any more letters on the subject, except as advertisements on the wrapper.—E. G.

a puncture, which was accordingly done at the most prominent part: this gave vent to a small quantity of serous fluid, tinged with blood, and M. Roux thought he could feel the instrument enter the substance of the radius, penetrating, what seemed to be, osseous lamellæ. On more close examination, it was perceived that the tumor pulsated, and this pulsation was arrested by compressing the brachial artery, at which time the tumor likewise diminished in size. These circumstances induced the surgeon to regard it as a vascular tumor, situated in the texture of the bone. He had some doubt as to whether he ought to tie the brachial or the radial artery, but at length determined on adopting the former proceeding. The artery was accordingly laid bare at the middle of the arm, and a double ligature passed under it, *a roll of plaister being interposed between the ligatures and the vessel.* The pulsation ceased; the tumor diminished, and the patient was going on well at the date of the report, which was some days after the operation.—*Lancette Française.*

The practice of interposing something between the vessel and the thread with which it is tied, which is now universally abandoned in this country, from its injurious consequences, is still pertinaciously maintained by M. Roux, and other French surgeons, as in the case above detailed:—is this because the improvements in this branch of surgery are of foreign origin?

HOSPITAL ST. LOUIS.

Dangerous Accident from the escape of Gas.

DURING the night of the 18-19th of December, the gas by which the Hospital of St. Louis is lighted became suddenly extinguished in one of the wards, where some workmen and convalescents sleep; after a short interval, however, the supply of gas being renewed, it flowed through the pipe into the room. The aperture was at the end of the ward, and at the height of about seven feet from the ground. At the same time, by accident or neglect, a brazier, containing ignited charcoal, was left in such a situation as also to diffuse its product through the room. M. Sabatier was called about one o'clock

to visit a young man whose bed was near the door of the apartment, and who, having had occasion to go to stool, rose for that purpose, when he was seized with vomiting immediately, and fell down senseless. This accident had occurred about an hour before M. S. was called; he could then speak with some difficulty, his pulse was frequent and compressible, he complained of weight in his head, and did not feel pain when pinched in various parts of the body. The air of the room had already been renewed by opening the windows. It was evident that he was improving, and that fresh air only was required to complete his restoration. M. Sabatier made him inhale a weak solution of chloride of lime, and next day he was able to go to his work. This person, however, was not the only one who suffered; all those in situations exposed to the gas were seized with head-ache, nausea, and vomiting. The day after, eight still had head-ache, but only one retained the nausea.—*Journal Hebdomadaire.*

LONDON HOSPITAL.

Strangulated Femoral Hernia.

DENNIS RING, æt. 55, admitted into London Hospital September 3, at one p.m., by trade a pavior, subject to cough and pulmonary disease. Has had a femoral hernia on the left side three months, brought on by cough, which has since that time frequently occurred, but has been always easily returned by himself; has never worn a truss. Had a severe fit of coughing three days ago, which again brought down the rupture; and upon attempting to reduce it as formerly, his efforts failed. Bowels have not been opened since.

There is some dyspnoea, sickness, and hiccough; a small tumor in left groin, immediately below Poupart's ligament, which is painful on pressure and immovable; abdomen tense, and tender on pressure; features pinched; tongue white and dry; pulse small and compressed; skin cool. Was put into the warm bath, and the taxis applied, without any effect being produced upon the tumor; the operation was therefore proposed, consented to, and performed by Mr. Luke at half-past three p.m. An incision was made over the tumor in the usual manner, through the integuments, in doing which one of the inguinal glands was divided, thus rendering the further dissection deeper; the fasciæ were cut through, fibre by fibre, and the sac cautiously opened, which, from the vessels passing in a circular direction, somewhat resembled the intestine, and perplexed the case; but by pinching the

sac there was felt a circular body underneath it. Upon opening the sac, which was very much thickened, there was no fluid in it; and the intestine (a portion of the ilium) was exposed, every where adhering to the interior of the sac, particularly about its neck, by recent and easily separable adhesions. The gut was very dark-coloured; and when the stricture was divided, which was caused by Poupart's ligament, it was easily returned. The integuments were brought together with one ligature, and adhesive plaister.

9 P.M.—Less pain and tension of abdomen; twenty-three leeches are now on; has been once sick; no pain on pressure; no motion; has taken 3iij. of sulph. of mag.; hiccough at times; tongue white; pulse fuller, 76.

Magn. Sulph. 3iij. ex aqua. Menth. P. 2a. quaque horâ.

Sept. 9th.—Has taken in all about 3vi. of salts; some pain of abdomen; took some gruel, which staid down; six motions; tongue white, but moist; pulse small and slow.

Hirud. xij. abdomini.

11th.—Appears now entirely convalescent; is desirous of getting up and going to work; no pain; tongue rather white; no motion to-day; no fever; wishes more to eat.

Ol. Ricini, 3j. Middle diet.

Oct. 12th.—Had no further complaint since last report; was provided with a truss, and left the hospital well.

Peritonitis—Old Sac containing Cartilage.

Thomas Perry, æt. 80, was brought to the hospital August 25th, at half-past five P.M. Comes from Wales, and cannot speak English; but by means of an interpreter it appears he has been subject to rupture sixteen years, on both sides, easily reducible, and which he could himself reduce. He perceived, however, a swelling in his right groin, in the situation of the external ring, three weeks back, which he could not reduce; it came down suddenly while in a fit of passion, three days after which he had vomiting, and has not been able to keep any thing on his stomach since. There is evidently a hernia on the left side, which is at this time easily reducible. The tumor, however, on the right side is about the size of a small walnut, circumscribed, very hard, and unyielding; pressure increases the pain, which is constant; had a very small motion this morning; one before that three days back; but none, as is stated, before that for ten days; no impression made on the tumor by coughing, except that propagated by the abdominal muscles; abdomen very tense, and painful on pressure; hiccough at times; has been twice sick since his admission; tongue dry, red, and furred in many parts; pulse

small but wiry; countenance generally expressive of anxiety; went into the warm bath, from which he expressed relief; but no alteration was made in the tumor.

Hirud. xij. abdom.

Cal. gr. iij.; P. Sap. Opii gr. iiss. statim et P.M.

Magn. Sulph. 3j. ex aqua Menth. P. omni horâ.

Enem.—Colocynth. 3ss. ad Oj.

10, P.M.—Abdomen not quite so tense; no vomiting nor hiccough; much of the injection returned immediately; one dusky-brown motion.

Aug. 26th, 1 P.M.—Some sleep; abdomen not quite so tense; tumor the same; no vomiting or hiccough since 11 P.M. yesterday; three copious motions, more yellow; pulse softer and more feeble. The case is supposed to be omental hernia; but the man's having had stools is considered a sufficient reason for not performing the operation.

Hirud. xij. abdom.

Inf. Quass. Inf. Cascari. Aquæ Menth. aa. 3ss. ter die; c. Magn. Sulph. 3j.

27th.—A good night; less pain in abdomen; has retched three or four times, but has not vomited; three motions; pulse, stronger; tongue less dry.

Repetantur Medic.

28th.—Tenseness and pain of abdomen continue; no vomiting; hiccough at times; nausea; five motions; tongue less furred, and moister; pulse stronger.

Sept. 1st.—Weaker; pulse very feeble, at times scarcely perceptible; less pain; no vomiting nor hiccough; one motion last night.

6th.—Has been getting daily weaker since last report; has vomited every thing; bowels open; pulse feeble; abdomen not so tense; mouth dry; takes no notice of any thing unless roused.

8th.—Died at twelve A.M. this day.

9th, 2 P.M.—*Dissection.*—The peritoneum covering the abdominal parietes very much inflamed, as also that covering the intestines; about four ounces of serous fluid, with flakes of lymph, in the cavity of the abdomen; the folds of intestine glued together by bands of coagulable lymph, easily separable, however. The hernia on the *left* side had passed up, and appeared to be a portion of the descending colon, which was adherent to the ring. The tumor on the *right* side appeared to consist of the remains of an old hernial sac. The folds of peritoneum were very much thickened, and contained a substance resembling cartilage. The tumor was not adherent to the spermatic cord.

Dislocated Spine without Fracture—Air under the Arachnoid.

Oct. 9th.—A strong athletic man, forty-two years of age, but for some time past

BIRMINGHAM SCHOOL OF MEDICINE.

THE following students obtained the Prize Medals offered by the Lecturers during the last session:—

Anatomy and Physiology—

1st silver medalMr. Betts
2d ditto.....Mr. Palmer

Medicine—

1st silver medalMr. Hammond
2d dittoMr. Heeley

Surgery—

1st silver medalMr. Palmer
2d dittoMr. Hammond

Midwifery—

1st silver medalMr. Williams
2d dittoMr. Hall

Materia Medica—

1st silver medalMr. Binley
2d dittoMr. Hammond

Chemistry—

1st silver medalMr. Hammond
2d dittoMr. Binley

The prizes of 3 Guineas and 2 Guineas, offered by J. L. Parker, Esq. for the best essay on the "Varieties of the Human Species," and the "Incubated Egg," were awarded to Mr. Northall and Mr. Heeley.

and attention of the Demonstrators during the present season."

WM. INGLIS FERRAR, Chairman.

J. F. Hastie	F. T. Fagg
J. A. Ramsey	H. L. Weddell
J. R. King	J. West
J. N. Tomkins	Arthur Huffington
Wm. Marriott	Rich. T. Pellowe
Wm. Clark	H. Jackson
M. B. Collins	Frederick Shury
B. M. Bradford	J. W. Jeans
W. Sutcliffe	Edw. P. Parlier
R. R. Roberts	H. C. Day
J. Humphrys	Ed. Young
H. Waterworth	Henry Scott
John Mitchell	Thomas Ward
John Crouch	Jno. Steele
Francis Bennett	C. A. Cresswell
E. B. Medhurst	Fred. W. Brookes
Edward Hodges	Robert Hicks
Geo. Strong	Robert Mitchell
T. J. Bell	E. T. Hall
Geo. Todd	James Dixon
Geo. Turner	F. C. Howard
E. Dukes	J. D. Stuart
W. Dalby	William Wyatt
Henry Hall	A. A. Brett
Edward Griffin	E. T. Hodder
Charles Cookesley	J. B. Martin
Charles Humphrys	C. Trustram.
John Hodgson	

CHARGES AGAINST VARIOUS LECTURERS.

JUST as the present No. was passing the press, we received two other letters on subjects analogous to the above, one signed "A Pupil of Dr. Ashburner," speaking in strong terms of the perfect satisfaction afforded by that gentleman to his class; the other from Mr. J. Foot, Jun. in vindication of Mr. Guthrie, in consequence of some attack made upon him also in the *Lancet*. We have not read the paragraphs alluded to, but we are astonished that any one should think of answering charges coming from such a quarter.

NOTICE.

Dr. Haycraft's rejoinder to Dr. Hope in our next: it was intended for the present number, and its omission was accidental.

ERRATA.

In Mr. Parker's 7th Lecture, p. 454, l. 21, for "lingual branch of the eighth," read "lingual branch of the fifth."

P. 456, last paragraph, for "sixth," read "fifth."

A list of errata will be given with the last lecture, correcting various typographical errors; but the above are important, and therefore we insert them now.

W. WILSON, Printer, 57, Skinner-Street, London.

ANATOMY AT ST. THOMAS'S.

To the Editor of the *London Medical Gazette*.

SIR,

IN consequence of a gross mis-statement which appeared in the *Lancet* of last week, reflecting upon the Demonstrators of St. Thomas's Hospital, I should feel obliged by your inserting the enclosed in your next No.

I am, sir,

Your most obedient,

WM. INGLIS FERRAR.

St. Thomas's Hospital,
Jan. 19, 1831.

At a full Meeting of the Pupils of the Anatomical Class of St. Thomas's Hospital, held in the Demonstrating Theatre, Jan. 15, 1831,

MR. WM. INGLIS FERRAR in the Chair,

It was proposed by Mr. Wm. Clark, seconded by Mr. Hodges, and carried unanimously, that—

"We the undersigned Pupils of the Anatomical Class of St. Thomas's Hospital, who have dissected and attended demonstrations during the present season, do most distinctly deny the charges brought against the Demonstrators in the *Lancet* of this day, and do express our great satisfaction at the zeal

THE LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JANUARY 29, 1831.

LECTURES

ON

MEDICAL JURISPRUDENCE,

Delivered in the University of London,

BY PROFESSOR AMOS.

ON MEDICAL EVIDENCE.

What Questions a Medical Man may refuse to answer — "No person bound to criminate himself" — Dying Declarations; Duties of medical men regarding them — Contemporaneous Memoranda — Hearsay Evidence, when admissible — Importance of Watchfulness on the part of medical men — Illustrations of the nature of Examination in Chief, Cross-Examination, and Re-examination — Cases.

GENTLEMEN,—My colleague, Dr. Thomson, having explained the objects and outline of the course of lectures upon medical jurisprudence, which we purpose giving, I think I shall best be fulfilling the representations he has held forth to the public, by proceeding to business, without adding any thing to the general remarks which he has made with so much ability.

We will suppose, then, a medical gentleman duly summoned to give evidence upon a trial, and standing in the witness-box. We will, first, inquire what questions he may refuse to answer? There is no gentleman much advanced, either in the medical or legal profession, who has not, in the exercise of his profession, been made the depository of secrets—facts communicated to him in confidence, and retained within his own breast by that feeling of honour which guards the lips of all who are worthy members of an honourable profession. But the medical witness is asked, in the witness-box, to disclose a confidential communication. What

useful information can I prepare him with upon this subject in the lecture-room? I will direct him to a part of the trial of the Duchess of Kingston, for bigamy, A.D. 1776—the examination of Mr. Caesar Hawkins*. (The charge against the prisoner at the time she married the Duke of Kingston was, that she was the wife of the Earl of Bristol, of which offence she was convicted).

I will now proceed to shew the application to medical testimony of that rule of the English law, that "no person is bound to criminate himself." It is useful to observe, that some judges always caution a witness when they perceive any probability that his answer may criminate him; other judges leave it to the witness to raise the objection.

At the trial of Mr. Christie and Mr. Trail, at the Old Bailey, for the murder of Mr. Scott, who fell in a duel with Mr. Christie, Mr. Trail having been Mr. Christie's second, Mr. Pettigrew, the surgeon who attended Mr. Scott professionally on the field, was called as a witness for the prosecution, in order to identify Mr. Christie and Mr. Trail. Lord Tenterden and Mr. Justice Allan Park presided. Mr. Christie and Mr. Trail were seen going together to the field at Chalk-Farm, and returning from the field shortly after shots were fired, and the only plank between the prisoners and sentence of death was, that they were not identified upon the spot at the time of the duel. Mr. Pettigrew was asked whether the prisoners at the bar were the principal and second engaged against Mr. Scott? No suggestion was made by the court that the witness was not obliged to answer the question. Mr. Pettigrew turned round to look at the prisoners, and surveyed them for some moments; the interval, I remember, from having been present,

* We regret that our space will not allow of our giving the passages here quoted by the learned professor; we must only refer the reader to them in the State Trials (Howell's), vol. xx. col. 572.

was one of awful suspense ; but, at last, Mr. Pettigrew turned again towards the court, and said, that he did not recognize either of the prisoners. The prisoners were acquitted for want of being identified. Now it so happened, that shortly afterwards, Mr. Scott's second, Mr. Patmore, was indicted for murder, as being a party to the same duel ; and in this trial it was pretty clear that the prisoner must have been identified by Mr. Pettigrew, since Mr. Scott and his second, and Mr. Pettigrew, all went to the field together. But here, on Mr. Pettigrew being asked a question, with a view to identify the prisoner, Mr. Justice Bayley interposed. (See *Paris and Fonblanque M. J.* vol. i. p. 165).

Now upon the situation of Mr. Pettigrew on these occasions, I shall not hesitate to make a remark or two, because nothing arises out of the case reflecting on his skill, integrity, or good sense ; but if there is any thing to blame, it is all imputable to the scanty means which existed when Mr. Pettigrew received his professional education of obtaining information upon the subject of medical jurisprudence. I will say, therefore, that as events have happened, Mr. Pettigrew would have made a better figure in the witness-box had he known a little more of the law incidental to situations into which his profession was likely to lead him, and did lead him. That, probably, he would have regretted this want of information more if it had led to the forfeiture of the lives of Mr. Christie and Mr. Trail, and of Mr. Scott's own second too, contrary to the feelings of every individual in court, for there was a strong and universal feeling in favour of Mr. Christie : at all events, Mr. Pettigrew could not but have regretted his deficiencies, if, after concluding his evidence, he had been requested to spend the rest of the day with the gaoler, and the next morning but one with the executioner—a doom which must have awaited him if royal mercy had not intervened in pity to the deplorable legal ignorance of the culprit.

The same trial enables me to illustrate another subject of medical evidence—"dying declarations." You probably know that, generally speaking, in an English court of justice, what a person has *said*, which person is not produced in court, cannot be received in evidence : it is called "hearsay evidence." But there is an exception, in some particular instances, where what has been said has been uttered in a man's *dying* moments : the exception is confined to trials for murder.

The principle upon which this exception, from the general rule of evidence is founded, is partly on the awful situation of the dying person, which is considered to be as powerful over his conscience as the obligation of an oath, and partly on an absence of interest on the verge of the next world, which is

supposed to dispense with the necessity of cross-examination.

There was a melancholy case of a person of the name of Richard Coleman, executed for a rape and murder of Ann Green, in the year 1749. Coleman was convicted on the dying declarations of the prosecutrix ; but his innocence was established two years afterwards, when another person was executed for the same offence, upon the clearest evidence. Here a little cross-examination would probably have explained what was most likely a mistake of identity. But some persons, even in their dying moments, will exaggerate and blacken the offence of an individual to whom they attribute the loss of life. Human passions do not always quit their empire over man, though upon the verge of the grave ; and experience will justify the language of the poet—

"Even from the tomb, the voice of nature cries ;
Even in our ashes, live their wonted fires."

In the trial of Mr. Christie and Mr. Trail, the deceased, Mr. Scott, a short time before his death, made a statement to his physician, Dr. Darling, detailing all the circumstances of the duel, and which would clearly have identified the prisoners. I am enabled to state this to be the substance of the dying declaration, having heard it read before the coroner and his quest, who, on this occasion at least, were more thirsty for news than particular about legal evidence. I objected, but the coroner requested he might have a quiet evening and no law, and the jury were for turning me out of the room. Before, however, Dr. Darling could be allowed to give any of this statement in evidence at the Old Bailey, inquiries were made of him, in the witness-box, as to the precise state of the deceased at the moment of making the statement proposed to be given in evidence, and as to any conversation which might have passed between himself and the deceased relative to the situation of the deceased, before he entered upon the statement in question. As to which, Dr. Darling said, "The deceased asked me if his wound was necessarily mortal?—upon which, I told him that his case was one of extreme danger, but that there had been instances where persons had recovered under such a wound. The deceased then said, 'I am satisfied.'" This passed just before the statement which it was proposed to inquire into, and it was held, by Lord Tenterden and Mr. J. Allan Park, that the statement was inadmissible as 'a statement in *articulo mortis*, inasmuch as the language of the physician might naturally be supposed to have kept alive in Mr. Scott's mind some hopes, though faint, of a recovery. I recollect, upon the last summer circuit, a woman, who died of poison taken at the instigation of a man by whom she

had had a child, related all the circumstances under which she had taken it shortly before her death; but as it appeared that she had afterwards wished that more medicine might be sent for, evidence of her declarations was rejected, because they were not made after all expectation of life was extinct.

Dying declarations are usually proved by medical men, and the proof of them imposes great responsibility upon the medical practitioner. Often have I seen a crowded court of justice thrilling with expectation, as a medical witness is detailing the facts necessary to let in the dying declaration, and afterwards in detailing the dying statement itself. I need not mention, after observation of the facts in Mr. Scott's case, that every word said to or by the deceased, and the order of the conversation, ought to be related with the greatest precision; and the *ipsissima verba* of the statement should be given as nearly as possible. Hence every medical man who has mixed a proper quantity of law with his medical education, will not fail to have his attention more alive on such awful occasions than one who does not know the necessity for such very accurate observation; and he will seize the earliest opportunity, whilst the circumstances and words are fresh in his memory, to commit them to writing: for he will be allowed to refresh his memory with such memoranda in the witness-box, provided they are made at the time of the transaction, or as soon as practicable afterwards. From my experience of courts of justice, I am enabled to say that, on such occasions, medical men are sometimes not only too inattentive, but they are, on the other hand, sometimes too officious—interrogating the dying man as to the facts connected with his death, suggesting circumstances, and pressing him to a fuller account. All this has a very bad look, and exposes the medical man to much unpleasant remark, and thwarts the objects of justice. To be entitled to weight, therefore, a dying declaration ought to be voluntary; and least of all should it consist of mere assent to circumstances suggested—mere answers of *yes* and *no*, to the questions of others; which is called “leading a witness,” and which would not be allowed even where a witness delivers his testimony, subject to all checks upon it, when he comes forward in open court.

I will merely add further, upon this subject of dying declarations, that to make them receivable it is not necessary that the deceased should *express* any apprehension of danger: for his consciousness of approaching death may be *inferred* from the nature of the wound, or the state of illness, or other circumstances of the case. This imposes upon the medical man who has occasion to give evidence respecting a dying declara-

tion, to be able to give a very clear account of the precise situation and degree of danger of the deceased at the time the declaration was made.

I have recommended the taking of contemporaneous memoranda. This should be particularly adverted to in post-mortem examinations; in which cases it may be useful to have a person whose sole business it shall be to take down minutes, which should be inspected by the operator. On the trial of Miss Blandy, for the murder of her father, Dr. Addington read to the court a very full and satisfactory account of the appearances of the deceased upon dissection, which he took down in writing at the time of the investigation. Upon the trial of Donnal, at Exeter, in 1817, for the murder of his mother-in-law, the two medical men who conducted the post-mortem examination differed in several particulars as to what had been done; and I recollect that, upon Dr. Edwards being asked, “Did you examine the heart?”—he answered (not in a way to raise him in the opinion of by-standers), “I do not recollect; I am not quite certain.”

I have known several instances in which a physician's prescription-book has been read in courts of justice. In a late trial of a *will*, in which I was engaged, a physician was able to throw great light upon the inquiry by means of a book in which he copied all his prescriptions; and which enabled him to trace the progress of the testator's health at a distance of more than a dozen years, when otherwise it is probable that his memory of the case might have afforded no assistance. Indeed, another physician, of considerable eminence in London, had entirely forgot the case, and the plaintiff's advisers were puzzled to determine whether they should bring this physician from London, at great expense, to Nottingham, to say nothing at all, or should refrain from bringing him at the hazard of its being insinuated that his evidence was suppressed.

I have noticed the necessity of a medical man making memoranda. It is not necessary that memoranda should be made by the witness himself, if made at the time under his inspection. But the witness cannot assist his memory by a memorandum which another person has made and which he did not inspect at the time it was making, or at least speedily after the transaction of which it is a minute. The not adverting to this distinction occasioned a great deal of floundering in Dr. Granville's evidence upon the occasion of the Gardner Peerage. Dr. Granville's evidence went to affirm that the period of gestation in women with child had been extended beyond the ordinary period of between 265 and 280 days, to 285, 290, 300, 308, 310, 311, 315 days; and for this Dr. Granville relied on numerous regis-

tended of a lying-in hospital which he attended*.

Now it must have excited the jeer of every person cognizant with the practice of our courts of justice, to find a witness refreshing his memory from minutes which were not examined at the time of making them by himself, but which "he took for granted" were correct.

Dr. Granville's evidence in the Gardner Peerage consumed a great portion of time; but, in the end, nearly the whole of it was struck out. This must have had a very bad appearance in the eyes of by-standers—and yet the fault will not, on consideration, be found to lie in any defect of professional skill, or common sense; still less in a moral defect; but in the miserable state of darkness in the witness's mind, with regard to the rules of medical evidence.

A ground upon which a great part of Dr. Granville's evidence was struck out, was, that it was a mere hearsay statement of what was the period of commencement of the utero-gestation of women, as related by the women to Dr. Granville after delivery, or at an advanced period of pregnancy. The fallacy of such statements was fully exemplified in the Gardner Peerage case, when the women who had made the statements came to be cross-examined. I shall conclude my references to this case by reading what was said on the subject by the Attorney-General, who, you will bear in mind, was not the advocate for either litigant, but who appeared for the crown, in a sort of judicial capacity. (We regret that we cannot find room for the extract).

Hearsay evidence is rejected by the English law, among other reasons, principally for these:—1st, that it is not upon oath; 2d, that the party making the declaration is not subject to cross-examination. Are we then to infer, that what a patient says to his medical attendant can rarely become matter of judicial evidence? By no means. Inquiries by medical men, with the answers to such inquiries, are often received as evidence of the state of health of the patient at the time; and it is every day's experience that what a man has said of himself to his surgeon, is evidence in an action of assault, to show what he has suffered by reason of the assault; and in a case well known to lawyers, the conversation of a woman, as to her existing state of health, was allowed to be given in evidence after her death, in order to invalidate a policy of insurance made upon her life about the time of the conversation in question. This kind of evidence of a person's own statements of complaints and

symptoms is admitted on the ground of its being part of what lawyers call the "res gesta," being not evidence of a by-gone fact, but part itself of the fact which it accompanies, and necessary to shew the true character of that fact. The distinction is between the evidence in the Gardner peerage, where women related that eleven months before they began to be with child; and the evidence in the Anglesea peerage, which was a trial that lasted fifteen days, and related to a supposititious birth, where Dr. Jemmal, a physician who had felt Lady Altham's breasts and found them turgid, and spoke to her having yellow spots coming out upon her, and her making what he called "long spits," as if she were with child. The Doctor was allowed to state, that he asked Lady Altham if she was with child, and that he made various particular inquiries respecting her then state of health, and also to give in evidence Lady Altham's answers. The physician's evidence in this case was supported by that of an *Irish* maid-servant, who deposed that Lady Altham, who was of small stature, had a "little big belly."

And it may be proper to observe here, that what has been said in the presence of a party accused is admissible against him, not as evidence of the truth of the statement, but as showing the *demeanor* of the prisoner at the time such a statement was made in his presence.

An example of this occurs in a very remarkable trial of Patch, about twenty years ago, for shooting Mr. Blight, with whom he had been living in the same house, and upon most intimate terms. I will read you the examination of Sir Astley Cooper:—(We intend to publish the leading particulars of this case in our next number).

Now the way in which the judge applies this evidence is, that the demeanor of the prisoner was suspicious; because it would have been more natural for a person who found that his friend was murdered, when a proposition was made to make the earliest possible inquiry, that there should have appeared some anxiety, instead of that indifference expressed by the prisoner.

I may mention by the way, as a fact which, of course, does not appear in the printed trial, that Patch's counsel, then Sergeant Best, pressed the prisoner, in conference before the trial, to say whether he was left-handed—but he protested he was not—as the evidence proved that the murder was committed by means of a pistol shot by a left-handed man. But upon being called upon to plead and put up his hand, he answered "not guilty," and raised his left hand.

I have often thought that this rule of receiving in evidence whatever is said before a prisoner, is very injurious to accused persons; because common juries do not attend solely to the point of the demeanor of the pri-

* Here Mr. Amos read some passages from the published evidence. Perhaps we may venture to refer the reader to Dr. Lyall's pamphlet, "Medical Evidence, as given in the Gardner Peerage Cause: 1825-6, Lond. 1826."

soner on hearing the statement, but they receive the statement as proof of the facts stated. The distinction is too refined for common minds.

And I recollect at the last spring assizes a case in which a judge seemed to have been bewildered by the subtlety of this distinction. A man, his wife, and wife's sister, resided in a small house in Leicester: the man had a child by his wife's sister, and it appeared from a conversation between the wife and the husband, in the presence of a medical man, that the husband, immediately upon the birth of the child, had taken it into the next room and killed it. Baron Garrow would not allow the medical man to give this conversation in evidence, on the ground that a wife is never admitted as evidence against her husband, and that, therefore, what she says cannot be received against him. Now, I conceive, it is pretty clear that the judge's mind was in a great state of confusion as to the principle of the admissibility of hearsay statements made in the presence of prisoners. If they are no evidence at all of the facts related, except as the hearsay statement is acknowledged or countenanced by the language or demeanor of the prisoner, surely it is quite immaterial by whom the statement is made, whether made by a wife, or, to put another example, by a person who from having committed perjury, or for want of religious principle, could not be a witness.

I shall only make one further remark upon this subject, that as medical men are often among the first persons present after a violent injury has been committed, and hear a great deal said upon the occasion, they should not only have their ears open to those who speak, but their eyes open to the demeanor of those who listen; they should at least be able to say, if one of the party is afterwards accused of the crime, whether he was close enough to hear what was said, and whether he did in fact attend to it.

I shall just have time this evening to say a few words on the subject of examination in chief, cross-examination, and re-examination.

The counsel who calls the witness examines him, as it is said, "*in chief*," and the principal rule observed upon an examination "*in chief*" is, that "leading questions" are not to be asked; for it is supposed that a witness may be too ready to serve the cause of his party, and willing to adopt and assert whatever may be suggested for the benefit of the person on whose behalf he is called. Questions to which the answer "yes" or "no" would be conclusive, or which plainly suggest to the witness the answer which the party or his counsel hope to extract, are objectionable, as it is most essential to justice that the witness should not be prompted.

When the witness has been examined in chief, the adverse party is at liberty to *cross-examine* him, and for this purpose may put leading questions. These are calculated to obtain from him, in the shortest and most direct way, a knowledge of his situation with respect to the parties and the subject of the litigation, his interests, his motives, his inclination and prejudices, his means of obtaining a correct knowledge of the facts to which he deposes, the manner in which he has used those means, his powers of discerning facts in the first instance, and his capacity for retaining and describing them, and the consistency of the witness's present statement with what he has stated at other times.

When a witness has been cross-examined, he may be *re-examined* by the party who calls him; this is the species of examination which, perhaps, requires more talent than any other on the part of the counsel. Leading questions are not allowed upon re-examination, nor can the witness, in this stage, be examined as to any facts unconnected with the subject of the cross-examination, and which do not tend to explain it. The objection on these occasions is in these terms:—"How does that matter arise out of my cross-examination?" The object of the re-examination is to explain any new facts which have come out upon cross-examination.

The nature of these three species of examinations being the ordeal which every witness has to undergo, requires to be elucidated by an example or two.

On the trial of Donnal for poisoning his mother-in-law, Dr. Edwards deposed in chief that he was of opinion that Mrs. Downing was poisoned by arsenic, which he had detected by certain chemical re-agents. Upon cross-examination he was made to state the tests he had employed—viz. sulphate of copper and nitrate of silver: this was with a view of impeaching these tests by subsequent witnesses. It appeared, moreover, that Dr. Edwards had, by means of the tests he had employed, procured arsenic in solution, but not in substance; and he was asked, in cross-examination, whether he knew any mode of procuring arsenic in substance from arsenic in solution, and upon his explaining how this could be done, he was asked whether the result of such a process would not have removed all doubt?—Certainly. Here the cross-examiner left him. Then the re-examiner took him up, and asked him why he did not try the third test? This apparent impropriety he endeavoured to explain away by stating, that after trying the other tests, there was not sufficient of the fluid remaining to try the third test. Whether this was a sufficient explanation in the view of a medical man, you will learn from my colleague. I only wish to make you understand the

manner of raising and removing inconsistencies in a witness's testimony by cross-examination and re-examination.

With a view of illustrating the practice of cross-examination and re-examination more to the life, I will take an example from the trial of Donellan for the murder of Sir Theodosius Boughton, by poisoning with laurel water. I select this instance the rather on account of the high controversies that have been raised, both as to the competency and integrity of the medical evidence, especially that of John Hunter, and also as to the effect of the presumptive evidence. You will probably think that the small part of the presumptive evidence which I am about to give is of a very cogent nature.

[The learned gentleman here concluded his interesting and highly valuable lecture with some passages from Donellan's case: we regret once more that our space will not permit us to give the passages at length, with the professor's remarks; but the case in question will be found in all the modern works on Medical Jurisprudence, and another opportunity may offer of reverting to Mr. Amos's observations.]

ON PULSATION OF THE JUGULAR VEINS.

Abstract of a Clinical Lecture lately delivered

BY DR. GRAVES,

AT THE

MEATH HOSPITAL, DUBLIN.

Various Theories discussed: Lancisi's—Adams's—Barkow's.—The Phenomenon mainly depends on Hypertrophy and Dilatation of the right Auricle.

GENTLEMEN,—At our last meeting I endeavoured to trace the connexion which exists between certain symptoms and certain organic diseases of the heart. I shall now direct your attention to pulsation of the external jugular veins, and endeavour to assign to this symptom its proper diagnostic value. It is singular that authors speak with such uncertainty concerning the cause of so obvious a phenomenon. Lancisi, who first noticed this venous pulsation to be a symptom of diseased heart, considered it as a sign of aneurism of the right ventricle, and of course must have attributed it to a regurgitation from that ventricle, through the auricle, into the veins.

This is also the opinion of Mr. Adams, who has written an excellent paper on diseases of the heart, in the fourth volume of the Dublin Hospital Reports. Mr. Adams observes—"in the natural state of the heart it is probable that there is constantly some little influx into the right auricle during the contraction of its corresponding ventricle, as the valves readily admit it, but the great swelling of the jugular veins is only seen where extraordinary efforts are made, or where, from any enlargement of the right side of the heart, it is capable of containing a larger quantity of blood than it can readily transmit through the lungs, or the left receive. On these occasions it is that the pulsations of the jugular veins become evident; they are synchronous with the action of the heart, and can more readily take place when the right ventricle has been preternaturally dilated, as it is not likely that the valve will increase in size and breadth in proportion as the auriculo-ventricular opening enlarges." Bertin's opinion is similar to that of Mr. Adams, as he asserts that "pulsation of the jugulars is never observed except in cases of dilatation and hypertrophy of the right ventricle, and where the right auriculo-ventricular opening being enlarged considerably, cannot be completely closed by its valve." This seems also to have been the explanation Laennec gave of the same phenomenon, but Corvisart placed no reliance on it as a symptom. In a paper by Dr. Stokes and Mr. Hart on the actions of the heart, published in the Edinburgh Medical and Surgical Journal, for October 1850, the following observation occurs: "there is an interesting case at present under our care, in which a strong pulsation is evident in the external jugulars; these pulsations are exactly synchronous with the impulse of the heart, which is precisely what should be anticipated, considering the impulse as synchronous with the contraction of the auricles." According to these gentlemen, therefore, the regurgitation into the veins is caused by the contraction of the right auricle, not by that of the right ventricle.

Before we examine these opinions more accurately, let us, gentlemen, recollect to mind the appearances which we ourselves had lately an opportunity of witnessing in the three cases of diseased heart we lately examined, and in all of which during life the phenomenon of pulsation

of the jugulars had been remarkably displayed. You may remember that in each of these cases there existed hypertrophy and dilatation of the right auricle and ventricle, together with a similar affection of the left auricle and ventricle. I paid particular attention to the state of the right auriculo-ventricular opening, and of the tricuspid valves, but in neither could we detect any thing morbid. This opening, it is true, measured in circumference about one-sixth more than the left auriculo-ventricular opening, but we have seen this disproportion so often in persons who had no disease of the heart, that we must subscribe to the opinion of those anatomists who consider it, and the greater size of the right cavities of the heart compared with the left, as by no means an unhealthy state of parts, particularly in persons who, like our patients, had been afflicted with a tedious agony and long continued dyspnœa, causing a considerable accumulation of blood in the right side of the heart. I cannot avoid, therefore, denying the inference that pulsation of the jugulars depends on enlargement of the right auriculo-ventricular opening, or deficiency of the tricuspid valves, for we have just seen that in our three cases these parts preserved exactly the same relations which we have frequently observed in hypertrophy and dilatation of the heart, although unaccompanied by jugular pulsation during life; neither can I assent to Mr. Adams' assertion, that the pulsations of the jugular veins are most evident where they are swollen and turgid, for the fact was pointed out by Dr. Stokes, and verified by me, that in general this pulsation is much more perceptible in those states and positions of the body in which the jugulars are comparatively empty. It is worth while considering whether this pulsation of the jugulars, which always presents a sort of wave-like appearance, that at first view favours the theory of regurgitation, may not be rather owing to a motion resident in, and arising from the coats of the vein itself. Barkow, the celebrated German physiologist, has lately observed in living animals, that this wave-like pulsation of the veins near the heart not unfrequently continues even after the motion of the ventricles and auricles has ceased; and consequently he concludes that it is not dependent on

the latter. There are other reasons, too, which render this probable. Thus this pulsation has occurred in veins too distant from the heart to allow of their being influenced by regurgitation. Hunauld, as quoted by Laennec, saw it very perceptible in the superficial veins of the arm, and Laennec himself saw a similar case. But a case still more conclusive is related by Dr. Davis, in the 4th volume of the *Dublin Hospital Reports*:—"In a girl, six years of age, labouring under symptoms of acute hydrocephalus, there was a pulsation in all the veins, distinct and well marked, synchronous with the pulse, and in the veins of the extremities perceptible to the eye, even at the distance of two yards. The veins were rather larger than is usual at her period of life, and pressure on any of them stopped the pulsation between the part compressed and the heart, so that it obviously could not be caused by regurgitation from the auricle." This pulsation observed by Dr. Davis, agreed with the pulsation of the jugulars, in diminishing, and finally disappearing, as the vein, in consequence of the application of pressure between the part examined and the heart, became distended and tense with blood. Although no disease of the heart existed, and although the vascular system was in every respect healthy, yet Dr. Davis explains this venous pulsation as being continued from the heart, through the arteries and capillaries, to the veins. This explanation, however, is, for many reasons, inadmissible. In the first place, the case presented nothing in the strength of the heart's pulsations, or in the force of the pulse, which we do not meet with every day, and yet this venous pulsation is a very unusual occurrence. Secondly, we know that when the arterial system is in its ramifications much less minutely subdivided than it is in the capillary system of man, yet this subdivision is sufficient to prevent a propagation of the arterial pulsations to the vessels which arise from these ramifications. Thus, in animals with a *rete mirabile*, the arteries of the brain do not pulsate, and the same observation applies to the arteries derived from the gills of fishes. These considerations are sufficient to shew that, in Dr. Davis's case, the pulsation of the veins must have arisen from some cause re-

siding in themselves, and totally independent of regurgitation on the one hand, or ventricular impulse on the other. Another circumstance equally militating against both these suppositions, attracted your attention in one of our cases; I mean the *double pulsation of the jugulars*. This double pulsation was not observable when the vein was swollen and turgid, at which time the pulsation was only single; but as soon as this turgid state was diminished, in consequence of a diminution in the causes which produced the pulmonary obstruction, then the pulsation again became double. The first pulsation of the jugular was, as far as we could judge, synchronous with the heart's impulse against the ribs, and was immediately followed by another distinct wave-like pulsation of the vein; after which was a short pause. If the heart's impulse against the side be caused by the systole of the ventricles, it is evident that we have no force, instantly succeeding it, to produce a second regurgitation; for the ventricular systole is followed by a pause, or interval of rest, during which the auricles are filled. If, on the contrary, Dr. Corrigan's theory be assumed as correct, and the impulse against the side is caused by the ventricular diastole, then the first jugular pulsation might be attributed to regurgitation arising from the contraction of the right auricle, and the second regurgitation from the contraction of the right ventricle; but when speaking of the sounds and motions of the heart, I have already expressed my opinion, that, however ingenious Dr. Corrigan's theory may be, his experiments require to be multiplied and confirmed before we can assent to its truth. An experiment I showed you the other day deserves to be here noticed:—In a woman, whose external jugular on the right side had formerly presented the phenomenon of single wave-like pulsation in a very remarkable degree, but in whom this phenomenon had lately ceased nearly altogether—in this woman, when the finger is applied so as to compress the external jugular at about the middle of its course down the neck, and that the compression is suddenly removed, a wave-like pulsation takes place, not in the portion of the vein between the spot compressed and the heart, as it should do, were this pulsa-

tion owing to regurgitation, but at the other side, a fact almost amounting to a demonstration that a power of motion exists in the veins, independent of the motive powers of the heart. It would appear that hypertrophy with dilatation of the right auricle is the disease indicated by pulsation of the jugulars, and the latter may be supposed to be produced by an hypertrophied state of these veins, imparting to them a greater motive power, which participates in the motion that, commencing in the sinuses of the venæ cavæ, spreads on the one hand to the auricles and on the other to the cavæ and their more immediate subdivisions. Hypertrophy of the veins alone would be insufficient to account for it, as we see no such motions in varicose veins, neither is hypertrophy actually necessary for the production of venous pulsation, as is evident from Dr. Davis's case. The veins near the heart, however, seem in a natural state, as is evident from Barkow's experiments, to enjoy an inherent power of producing wave-like pulsations, which power we may conceive to be increased by hypertrophy of these veins, although hypertrophy does not necessarily give rise to similar pulsations in more distant veins, as those of the extremities, which do not evince any pulsating power during health. I should not have detained you so long, gentlemen, in discussing this subject, but that I feel it to be a matter of great importance to determine the proper value of every symptom connected with so obscure a class of diseases as those of the heart. Although I look upon this pulsation as arising from a state of these veins always connected with hypertrophy and dilatation of the right auricle, yet as such a morbid change is, I believe, never unaccompanied by a similar state of the right ventricle, the existence of the latter may be also inferred from this symptom, which, it is to be observed, does not necessarily indicate either enlargement or diminution of the right auriculo-ventricular opening, or disease of the tricuspid valves. Such, gentlemen, are the inferences we seem warranted in drawing from the three cases we have examined; but we must wait for the examination of similar cases, not only by ourselves, but by others, before we presume to put forward these inferences in the shape of general and invariable conclusions.

ILLUSTRATIONS

OF

DR. CORRIGAN'S THEORY

OF

THE ACTIONS OF THE HEART.

BY DR. HAYCRAFT.

PART III.

It was not my intention, at least so early, to make any farther remarks on the theory which I have endeavoured to illustrate, had I not observed, in the Medical Gazette of 25th December last, an article by Dr. Hope, in which he has honoured me in a very especial way with his notice, and thus distinguished me from amongst the various opposers of his notions by most singular proofs of his "kindest feelings." These, perhaps, would not be worth noticing, had they not been mixed up with some show of argument opposed to Dr. Corrigan's theory of the heart's motions. Concerning the personal notice with which I have been favoured, I will first make a few observations, that we may be at liberty to attend to the matter in question, namely, the theory of the heart's motions.

Test of Medical Experience.

"Dr. Haycraft," says my *kind* antagonist, at the outset of his second essay (Gaz. Dec. 11th), "candidly avows that he is incompetent, from personal knowledge and experience, to apply physiological principles to the explanation of the diseases of the heart," &c. Now from what does this candid avowal? From the following words, forming the beginning of the paper referred to—namely, "The application of physiological principles to explain disease is difficult; nor should I have undertaken this part of my task had not the way been so well prepared for me." So, then, the perception of the difficulties of a subject is, according to Dr. H., an acknowledgment of incompetency and inexperience. Now it has been often observed that the tyro in medicine, on his first entrance into the field, in the ardour of his newly-acquired knowledge, believes he can, by the skilful use of his weapons, cut down and destroy every disease, however monstrous

in its form and vigorous in its attacks; in short, he sees no difficulties. After a few years, however, when he has acquired experience, he perceives that the matter is not quite so easy as he imagined; difficulties are observed, and he becomes wiser and more modest. Now this being true, it should be inferred that he who has discovered the difficulties of medical or other inquiries, must have some experience in them. On the other hand it follows, that as Dr. Hope has not yet made that valuable discovery, he has not yet acquired the requisite degree of experience; or else, what is worse, he has not the art of turning it to account. Of this I am certain, that had he possessed a knowledge of the difficulties of the subject in question, with a shade of modesty and self-knowledge, he would never have ventured so much on the public indulgence.

As to the fact of my auscultic experience, I can assure him, notwithstanding his six years' experience, that my stethoscope was already fashioned and in operation—aye, and my experience too—while his was yet growing in its native log. "*Si qua latent meliora putat.*"

On correct Criticism.

"Dr. H." he remarks, "not being acquainted with the French language, has mistaken M. Pigeaux's meaning: *frottement* does not, in the remotest degree, mean checking, or, as elsewhere termed, dashing; of which Dr. H. would find a *sensible* proof if ordered to be frotté, for, according to his interpretation of the word, instead of a rubbing, he would get a drubbing." By the by, with relation to this pretty specimen of elegant wit, how does it agree with the declaration he had just before made, that he would throw aside weapons of ridicule, "and use nothing but plain argument?"

As to the criticism itself, the authorities lie now before me. Tocquot translates *frotter* by the words to *rub*, to *bang*. Martinesli turns the same word into the Italian, *fregare* and *battere*; and *frottement* into *collisione*. The word, from these authorities, may be fairly translated into beating—banging—dashing; which are the only rendering I have given. *Frottement*, as applied to fluids, cannot mean rubbing—it must mean dashing. It would appear

rather odd to an English reader to talk of a river *rubbing* along its course, or of the blood *rubbing* within the ventricle of the heart. So much for the criticism. The reason of the criticism is evident: Dr. H. wishes to claim the discovery, that the motion of the blood within the heart is the cause of its sound. But we owe this discovery to M. Pigeaux and Dr. Corrigan, who, independently of each other, came to the same conclusion.

On the Quality of the First Sound of the Heart.

Again: Dr. Hope says, "Dr. Haycraft, ignorant that the first sound is prolonged, perverts Dr. C.'s meaning," &c. Of the fact of the first sound being prolonged, I am still ignorant, and ever shall remain so. I have always been taught, and experience confirms it, that a prolonged first sound is a symptom of disease. The first sound is, indeed, long and dull, in contradistinction from the second sound, which is short and acute: but it is long only in the same sense that a graver sound is longer than an acute one, and probably for the same reason. But Dr. Hope has grossly misstated my description of the first sound of the heart, as represented in the bladder experiment. He says, "the sound so produced would be short, smart, and clear, as proved by his own experiment of the bladder full of water;" whereas I represented it as a *dull* sound, resembling that of the heart (see Med. Gaz. vol. vii. p. 196): the words, short, smart, and clear, are interpolations of Dr. H. Laennec, however, has used the word *prolongé*, as descriptive of the first long sound; but for which our physiologists have, until Dr. Hope, used the word long, proper regard being had to the French idiom in this case.

On the Function of the Valves.

Again, Dr. Hope is guilty of making a misstatement and a misquotation, both of which I shall prove; whereon he founds a most puerile charge of ignorance of the functions of the sigmoid and auricular valves. If he had stated that I was ignorant of the philosopher's stone, or the man in the moon, even Dr. Hope's assertion might have been received. What! is it possible that an M.D. who has studied under Gregory, Monro, and the Duncans—who has for

years contemplated disease in the principal hospitals on the continent—whose observations and experiments on subjects connected with respiration, made even before Dr. Hope, perhaps, ever saw a stethoscope, have been recorded in the Transactions of the Royal Society of Edinburgh, and in most, if not all, the scientific periodicals of Europe—should be ignorant of the functions of the valves of the heart? Prodigious! Impossible! Who can believe it? Why does Dr. Hope force me into a boasting which to the reader may appear as ungraceful as it is disagreeable to the writer?

Dr. Hope's Diagnosis.

But Dr. Hope brings a more important charge against me—that I have uncandidly suppressed his diagnosis, in the case of Christian Anderson, as imperfect. This case, the reader may recollect, was cited by Dr. H. for the purpose of illustrating disease of the auricular valves by his own theory; but it so happened, as we are informed, by an error of the printer, that in his diagnosis all mention of the disease in question was omitted. Where was the want of candour, then, in neglecting the remainder of the diagnosis, which had nothing to do with the subject? Had I observed the erratum (which I did not till Dr. H., in his last paper, pointed it out), I should have given it due consideration. To make amends, however, for the deficiency, as far as relates to auricular valvular disease, let us consider the part of the diagnosis omitted—namely, "great disease of the valves." Now the reader must bear in mind that the case itself was introduced by Dr. H. for the purpose of shewing the validity of his own doctrines in their affording marks by which the disease in question (auricular valvular disease) might be especially distinguished, but the diagnosis of "great disease of the valves" was no special one. It therefore, for the sake of his own credit, might have been omitted. Dr. H. would have done wisely, I think, by taking a friendly hint from the printer in omitting this part of the diagnosis. So much for my want of candour: the printer, as Dr. H. says, is accountable for it.

Identity of Dr. Corrigan's Theory.

We now come to that part of Dr. Hope's paper in which he thinks himself the strongest. He charges me with

inconsistency, inasmuch as being "a champion of Dr. Corrigan, I have modified and totally altered his opinions, &c." This, like his other charges, are singularly trifling and ill grounded. We will come at once to the proofs: and first, of the causes of the impulse and sounds of the heart.

In my first conclusion I say, "The cause of the impulse against the chest is the *rush of blood into the ventricle.*" (Med. Gaz. vol. vii. p. 200).

Dr. Corrigan expresses the same thing thus:—"The impulse is caused, not by the contraction of the ventricles, but by that of the auricles, and is dependent on the force with which the auricles send their blood into the ventricles." Again, in his eighth conclusion, Dr. C. says, "The beat of the heart is produced, not by the tilting up of the apex, but by its swelling and coming against the ribs in consequence of the rush of blood from the auricle." (Med. Gaz. vol. vi. p. 211.)

Again, concerning the cause of the first sound, I suppose it to be the *check*, or arrest, given to the rush of blood into the ventricle. Dr. Corrigan states, that "the first sound is occasioned by the rush of blood from the auricle into the ventricle." (Med. Gaz. vol. vi. p. 522.) The only difference is, that I have noticed the check as conditional to the sound: that it is so, I am sure Dr. Corrigan would not deny: that a check more or less complete to a motion of fluid producing sound is implied in the term *rush*, must be understood, I think, by every one.

Concerning the cause of the second sound, in which is the greatest, perhaps the only, difference between Dr. C. and myself, and which I have formerly clearly pointed out, I will now shew how very near are our opinions.

The reader is aware that Dr. C. believes that the second sound at the chest is occasioned by a collision of the internal parietes. He, however, remarks that it is "not necessary, for producing the sound in question, that every drop of blood in the ventricle should be expelled. . . . In our experiment already described, with the dead heart, it is not probable that, in drawing back the piston, we removed the fluid so perfectly as to bring the inner surfaces of the ventricle in contact through its whole extent, and yet the sound was heard, and loud." (Med. Gaz. vol. vi. p. 525.) Compare this with what we

have stated with reference to the same sound. "That this collision does invariably take place, however, I have my doubts, especially in cases of disease; that it ever takes place *completely*, I have still stronger doubts—but it is not necessary to suppose a *complete contact* of the internal parietes, for the purpose of accounting for the sound." (Med. Gaz. vol. vii. p. 198.) It is then attempted to be shewn how the sound may be produced, although the ventricle be not *completely* emptied. Where, I would ask, is the great want of coincidence of opinion?

We now come to the times of the heart's action, the determination of which constitutes, in fact, the grand feature of Dr. Corrigan's discoveries.

In the fourth conclusion, I have stated that the "first sound of the heart is coincident with the (*extreme*) diastole of the ventricle." (Med. Gaz. vol. vii. p. 200.) Dr. Hope remarks, "Dr. H. has again mangled Dr. C., whose words are, 'the first sound is caused by the rush of blood into the dilating ventricles.'" Pray what has one quotation to do with the other?—one speaks of the time, the other of the cause, of the heart's first sound. This is a specimen of Dr. Hope's logic equal to his former ones. But let us hear Dr. C.'s opinion concerning the time of the first sound. Referring to the impulse, which, being coincident with the first sound, may be properly considered as speaking of the *time* of the first sound, Dr. C. says, "The impulse of the heart against the side does not take place, as it appears, until the heart has been *almost fully dilated.*" (Med. Gaz. vol. vii. p. 6.) Now this "almost fully dilated," seems to me very much like my "extreme diastole."

My fifth conclusion is, that "the sound is coincident with the extreme systole of the ventricle." This is amply supported by Dr. Corrigan's idea, that the second sound takes place when the "internal surfaces of the ventricle strike together;" which can only happen at the extreme systole of the ventricle.

Dr. Hope allows that the sixth conclusion, which is, "That the pulse intervenes between the two sounds," coincides with Dr. Corrigan. I wonder at it, for as good arguments as those he has used might be produced to prove the reverse.

But why has Dr. Hope vainly attempted to shew that the doctrines I have been illustrating are different from Dr. Corrigan's? What can science gain by such an attempt, even if successful? The proper inquiry should have been—Do these doctrines agree with nature? Are they supported by facts? It is really tiresome to have to answer cavillings about trifles, when there are so many facts to be ascertained and truths to be confirmed. Dr. Hope's motive for thus turning aside the inquiry, is evident. He shall not, for all this, slip through my fingers. But first, I will clear away a little more of the rubbish.

Dr. Hope denies that the chief cause of the propulsion, as distinguished from the impulse of the heart, is the diastolic action of the ventricles which was known to Haller. He says that it is all my own. I should not have been ashamed of the discovery, to which not having any right, I do not pretend. Perhaps, however, I may take the credit of having more clearly pointed out the distinction as a diagnostic symptom in some active and passive affections of the heart. I can assure Dr. Hope that until he shall learn this distinction he will be often completely at a loss to make a diagnosis: but to prove that the propulsion depending on the diastolic action was known to Haller, I will cite his words. "*Contractio ista convulsiva, summa celeritate cum manifesta fibrarum corrugatione fit, et cor totum brevius, crassius, durius, redditur, et ventriculus sinister modice, dexter magis ad septum cordis accedit et basis aliquantum ad apicem, manifestius vero apex ad basin accedit, quod in vivis brutis dissectis certa fide crebro vidi, ut aliquid fraudi facisse appareat clarissimis viris, qui cor in contractione longius affirmaverunt.*" Now if, during the contraction, the heart becomes shorter, and the apex recedes, it follows that during its dilatation the heart becomes longer, and the apex is brought forward, or as I have expressed it, propelled. That Haller perceived the distinction between this propulsion and the impulse, is evident, because, believing as he did, that the impulse took place during the systole of the heart, and the propulsion during the diastole, it followed that they, in his opinion, occurred at different times, and therefore could not be the same.

Dr. Hope's incorrect Statements.

After stating that the doctrines I have attempted to illustrate "differ toto cœlo from Dr. C." he attempts to produce another feeble proof. Referring to my application of the new theory to explain the increased sound and impulse observed in hypertrophy with dilatation of the ventricle, I state, that "here it must be confessed that Dr. C. on his own notion of the contraction of the auricle being the efficient (perhaps I should have said, the only efficient) cause of the expansion of the ventricle, is unable to give a satisfactory explanation, and is therefore obliged to doubt the correctness of Laennec's description. Dr. Hope seizes the occasion, and pronounces the difficulty to be subversive at once of the whole theory." Dr. Hope adds, "Dr. Haycraft, by the above admission, does the same, for the doctrine that the auricular contraction is the cause of the impulse, is the very keystone of that theory, &c." Now, as it happens, this doctrine is *not* the keystone of the theory. Dr. Corrigan's words are, "the beat of the heart is produced not by the tilting up of the apex, but by its swelling and coming against the ribs, in consequence of the impulse given by the rush of blood from the auricle."—(Med. Gaz. vol. vi. p. 211).

Now, in my explanation of the causes of this rush of blood from the auricle, I have plainly stated (see Med. Gaz. vii. p. 199) that "the auricular systole is a *main cause* of the diastole of the ventricle and its consequences," viz. the rush of blood, impulse, &c. To this I have added three other subsidiary causes, namely, the diastolic action of the ventricle; the vis a tergo and the resiliency of the lungs; stating also, "that if either of them be increased, cæteris paribus, the intensity of the sound and impulse which depend on the diastole will be also increased. The use I make of this explanation, or, if you will, amplification of this part of the theory, is to show that, in hypertrophy with dilatation, by which the muscular diastolic action* of the ventricle is increased, will, by its being one of the conditions of increased rush of blood, produce increased sound and impulse. By this

* That the diastolic action of the ventricle is *muscular*, and not merely a relaxation or elastic resiliency, was shown in Exp. 6, because in that

explanation I obviate the necessity of Dr. C. doubting Laennec's correctness.

This explanation, Dr. Hope, contrary to all principles of reasoning, calls mutilating—mangling—seeing the theory prostrate—substituting a feeble elastic resiliency of the heart's parietes in lieu of Dr. Corrigan's auricular systole; and this substitution he would represent as Dr. Haycraft's theory!

Dr. Hope then proceeds to give an equally incorrect account of my explanation of Dr. Elliotson's cases of aneurism; but as this part of the subject is too important to mix up with Dr. Hope's puerilities, I will defer it to another part of my paper, only remarking that he completely misstates my explanation when he says that it supposes "that, *during* the diastole, the blood rushes completely through the ventricle," &c. (p. 393.) Such a supposition would be indeed difficult to allow. I would advise that gentlemen to read my explanation again, and try to understand it, before he pretends to refute it.

It is entirely on the foundation of the last-mentioned misstatement that Dr. Hope, with the "kindest feelings," asserts my ignorance of the function of the sigmoid valves!

Dr. Hope thinks he can trace an absurdity in the supposition that blood may flow in and out of the ventricle at the same time. But there can be no other sanguiferous cavity or vessel shewn, in which the blood is not constantly flowing in and out at the same time: and there can no reason be given why in a diseased state, when the ventricle has reached its *extreme* diastole, the vis a tergo assisted by the auricular contraction should not for a moment drive the blood through both the mitral and aortic valves, sufficiently so at least to dilate the feebly resisting parietes of an aneurism: but of this in its proper place.

Dr. Hope, in the midst of his blunders, finds another contradiction in my supposition, "that a check to the motion of the blood in the ventricle can take place at the same time that blood is rushing through the aortic orifice." On the same ground it would be a con-

tradiction to suppose, that the pulse (which is a check given to the motion of the blood in an artery) can take place at the same time that blood rushes through the artery. It is, nevertheless, quite true.

Again, Dr. Hope misquotes my words when I state that "*bruissement in the ventricle*," then, from disease of the sigmoids, *must* be occasioned by regurgitation from the aorta," &c. (Med. Gaz. vol. vii. p. 325.) His misquotation is, "*bruissement* from disease of the sigmoid valves, *must* be occasioned by regurgitation from the aorta," (Med. Gaz. vol. vii. 393,) leaving out the words "*in the ventricle*:" from this misquotation he would shew, that I consider every *bruissement* from disease of the sigmoids must arise from regurgitation, and must produce *bruissement* in the ventricle; whereas I have plainly stated in the very same page, that "*a disease of the sigmoids that would merely cause a narrowing of the passage, would produce bruissement in the aorta, and not in the ventricle.*"

But one of Dr. Hope's feeblest attempts has been to shew, that a rule founded on fact, which I have used for the purpose of illustrating Dr. Corrigan's theory, is a "false dogma." The rule is, that "*bruissement* is only heard in a cavity into which a jet of fluid rushes, never in the vessel out of which it flows." His refutation of the rule is, that a *bruissement* "generated even in the ascending aorta, may sometimes be heard *as far as* the apex of the heart," (Med. Gaz. vol. vii. p. 393.) I can also inform this acute inquirer, that the sound would be heard even "*as far as*" the very extremity of the stethoscope, and somewhat further also, or it would not be heard at all. Yet who would say that the sound was heard "*in the apex of the heart?*" or the stethoscope? the obvious meaning of my words is, that the *bruissement* always proceeds from the cavity into which a jet of fluid rushes, never from the vessel out of which it flows.

Immediately upon this we meet with another erroneous quotation. "He says" (referring to myself,) "that as the auricular valves were obstructed, the blood could not, during the ventricular systole, regurgitate through them:" adding, "this would have been true if the valves had not been obstructed, for they

experiment it was observed, that at the extreme diastole the axis of the heart became much longer than when it was in a state of relaxation or rest: also it could be stimulated into a diastolic action; but it would hardly be allowed to be correct to say that the heart could be stimulated into an act of relaxation, or elastic resiliency.

would then have been in a natural state of occlusion, but the very circumstance of their obstruction renders it false," &c. (Med. Gaz. vol. vii. p. 394). Now no such words are to be found in my papers: my words are, "the sound could not proceed from regurgitation through the auricular valves, because the sigmoid valvular passages were quite free, while the *auricular* passages were much contracted," (Med. Gaz. vol. vii. p. 324.) I afterwards add, "consider besides that the aortic and pulmonic *passages* were free, and the *auricular ones* obstructed."

Now it is solely on the ground of this misquotation that he assumes my ignorance of the functions of the mitral valves!

Dr. Hope's Dilemma.

Dr. Hope next refers to my explanation of the conditions which might have prevented regurgitation from the ventricle during its systole, in the case of Christian Anderson, (Med. Gaz. vol. vi. p. 941.) It appeared on dissection that "the tricuspid valve was an uneven cartilaginous ring, which admitted the middle finger." Mitral valve was an irregular cartilaginous ring, which admitted the little finger." Now the reader will find, by reference to the head of auricular valvular disease, in my second paper, that I have placed Dr. Hope in a dilemma, in the following way:—First, by supposing that these extremely contracted passages ARE capable of closure during the systole, forming a "potential valve, (which remedial process, by the by, he calls a *faux pas* of nature,) and thus "regurgitation with noise" would be prevented: or, on the other hand, by supposing the cartilaginous rings to be so rigid as not to close during the ventricular systole, that then there should have been two bruissements, one arising from regurgitation of a small portion of blood into the auricle, which Dr. Hope insists upon, the other louder, arising when the larger quantity of blood which "shoots from the auricle," and "rushes with instantaneous velocity into the ventricle," as Dr. H. describes it. The latter was contradicted by his own history of the case; the former supposition was incompatible with his system*: so that on one

horn or the other the Doctor is fixed. But it is an endless task to endeavour to reason with Dr. Hope, for he cannot even perceive when he is beaten.

[We have gone thus far in Dr. Haycraft's paper, and shall give the conclusion next week. We do this from a desire to be impartial: but at the same time we must add, that we question whether more of personality has not been indulged in by the disputants than is essential to the very interesting discussion in which they have engaged. Should either gentleman have occasion to renew the subject, it must be on grounds *exclusively* scientific.—E. G.]

LIGATURE OF BOTH FEMORAL ARTERIES:

Mortification of Right Leg—Amputation—Secondary Hæmorrhage—Ligature of External Ilac—RECOVERY.

To the Editor of the London Medical Gazette.

SIR,

If you consider the enclosed case worthy of publication, its early insertion in your valuable journal will oblige me.

I remain, sir,

Your obedient servant,

JOHN BRAITHWAITE,
Surgeon.

Macclesfield, Jan. 12, 1831.

George Billington, a shoemaker, æt. 53, tall, of spare habit, and unhealthy aspect, was admitted a patient of the Macclesfield Dispensary on the 30th of July 1829, and placed under my care. He complained of pain in the knees. On examination, an aneurism about the size of a walnut was discovered in the right popliteal space, and an incipient one in the left. These were so painful as to prevent him from following his occupation. A consultation of the medi-

cartilaginous rings formed in strictured passages do close completely, requiring often much force to dilate them. The flap, also, which took place at the very commencement of the bruissement, which Dr. Hope thinks "I discreetly pass over in silence," was probably occasioned by their suddenly and forcibly opening at the very commencement of the ventricular diastole. Now this explanation, if correct, perfectly supports the new theory, which supposes that the first sound (in this case it was a prolonged first sound, or bruissement,) depends on the diastole of the ventricle, and, *pro tanto*, ought to be considered as a proof of its correctness.

* The supposition that the cartilaginous rings in question, forming the passages, were capable of complete closure, and thus forming a potential valve, is strengthened, I think, by the fact, that

cal officers of the institution decided that no operation for the radical cure of these aneurisms should be recommended, as he was considered an unfavourable subject.

The action of the heart could be readily detected, beating with a peculiar thrill, over a greater extent of the chest than was natural, its pulsation intermitting on slight exercise; the left carotid, being much enlarged, beat with violence, and the whole arterial system acted with morbid force. He was directed to be kept quiet, and to take occasionally small doses of the sulphate of magnesia, with tincture of digitalis in an infusion of roses, with other remedies. A pain in the head, attended with a hard pulse, was relieved by bleeding. The aneurisms, however, gradually increased, and, in the following December, the one in the right limb had attained so large a size as to endanger its bursting. With the unanimous concurrence of the medical gentlemen, I proceeded, on the 16th of December, to secure the femoral artery, by passing round it a ligature consisting of four threads, at exactly six fingers breadth below the groin. The ligature came away on the eleventh day, the wound was soon healed, and the patient in a little time returned to his work. In the course of two or three months after this, the aneurism in the left limb became very distressing, and by the 18th of June the pain from it was excessive, though it had not attained the magnitude which the other possessed previously to the operation. At a second consultation it was recommended to tie the artery in this limb also. Its coats, on exposure, appeared thin and otherwise unhealthy; it was considerably dilated, and the sheath was found morbidly adherent to the vessel. After the operation, the limb was immediately enveloped in flannel, and the patient put to bed. He complained for a short time of slight giddiness and sickness. For about a fortnight he continued to do well. The ligature came away on the sixteenth day; he then complained of pain and coldness of the foot, attended with swelling. Anodyne and soothing fermentations were used, but the foot became more swollen, attended with congestion of the superficial veins. In this state the limb was placed in scalded bran, of an agreeable temperature, and covered

with oil-cloth. The disease continued progressive, and vesications formed in several parts of the leg and foot, which ended in mortification of the limb. With the intention of arresting this, he took bark in its various forms, combined with opium and ammonia; subsequently, pills with musk and opium. He was allowed wine, porter, and nutritious food. The applications were the nitric acid lotion, cataplasms of linseed meal, and port wine lees; the chloride of soda lotion, with opium, and the like.

My patient appeared now fast sinking; he lay in a low muttering state, with subsultus tendinum, and picking of the bed-clothes; apparently there was no chance of his recovery. However, under the administration of full doses of opium and Cayenne pepper, now substituted for the musk and opium, at the suggestion of Dr. Swanwick, and during the application of the chloride of soda lotion with opium, the man rallied, and a line of separation formed on the anterior part of the leg, within two or three inches of the knee-joint, and on the posterior within four or five. He was now exceedingly emaciated; two large ulcers on the back, occasioned by pressure, greatly adding to his irritation. Under these circumstances there was obviously no chance for a natural separation of the mortified limb, and at a third consultation amputation was recommended, which I performed above the knee on the 25th of July, the femoral artery in that limb having been taken up on the 18th of June. The incision made for that purpose appearing at the time of amputation quite healed, on removing the limb five ligatures were required to secure the bleeding vessels, and upon examination of it afterwards I found the aneurism reduced to about the size of a small lemon, and filled with a firm coagulum. The artery had become firmly united to the vein by adhesive inflammation, and the inner coats of the vein, being united by the same cause, rendered the vessel impervious. The stump was healed in about a month after the amputation, and my patient had regained considerable strength and spirits. Nothing now appeared likely to retard his rapid convalescence, when a hæmorrhage unexpectedly took place on the 22d August. It may be here necessary to state, that shortly after the amputation the inci-

sion made for the purpose of tying the femoral artery, though at that time it appeared healed, began to discharge a little sanious matter, which it continued to do more or less till the time of the hæmorrhage: it was from this little wound I found the blood issuing at a most alarming rate. Pressure for a short time arrested the bleeding, but it subsequently returned. A fourth consultation was called, at which it was agreed to pass a ligature round the external iliac. This being the evening of the 22d of August, the patient was so far reduced by the loss of blood that it was deemed advisable to defer the operation till the following morning. During the night he was carefully watched by three medical pupils, who alternately kept up pressure with the finger; a full dose of laudanum was administered, and when the patient awoke or became restless, a few spoonfuls of sago gruel, with wine, were given to him. At six o'clock on the following morning I proceeded to pass a ligature, consisting as before of four threads, round the external iliac: by following the directions given by Sir A. Cooper I easily performed the operation, without my patient losing an ounce of blood. On being put to bed he complained of no particular uneasiness, and soon fell asleep. The ligature came away on the eighteenth day, and up to this time he has been gradually regaining his strength and spirits.

up as a "competent authority") to give my opinion in the case alluded to.

A. B. is stated to have shewn decided symptoms of insanity, but by proper care and treatment he is stated to have recovered and again mixed with society; but after a few months he finds his mind again becoming *unsound*, and applies to two medical gentlemen to authorize his being removed into a licensed establishment for the care and treatment of the insane. The question at issue is, whether the above medical gentlemen, to whom A. B. applied, are authorized by the act of Parliament to sign a certificate declaring A. B. of *unsound mind*? Most decidedly, in my opinion, *they are*; for I firmly conceive A. B. to have been of *unsound mind* at the time he applied for such medical sanction to a license; and the act distinctly states, that the words "insane persons" shall be deemed and construed to extend to all persons whatever, whether lunatic, idiot, or of *unsound mind*—thus including and embracing every state and stage of mental aberration whatever. But though differing from the opinion of your correspondent in the reading of the act referred to, I cannot but fully concur with him in the propriety of an additional clause being inserted into the act, to the full effect named by him.

I am, Sir,

Yours obediently,

M. R. C. S.

LUNACY QUESTION.

To the Editor of the London Medical Gazette.

SIR,

THE letter which appeared in your last number, signed by "One who prefers Prevention to Cure," relates to a question of lunacy involving the construction of a clause in the act of Parliament, 9th of George IV. cap. 41—is one of great moment and interest to all who have insane and imbecile persons under their care and treatment; and, concurring as I do in the wish that some further light may be thrown upon the critical wording of that clause in the act alluded to by your correspondent, I venture (without, however, setting myself

REGISTRATION OF MEDICAL PUPILS.

To the Editor of the London Medical Gazette.

SIR,

You will be conferring an obligation on many of your readers, especially the younger ones, if you will remind them, that according to the new regulations of Apothecaries' Company, published at page 15 of your current volume, the REGISTRATION of medical students comes into operation on the first of February.

"All students in London (whose attendance on lectures shall commence on or after 1st January, 1831) are required to appear *personally*, and to register the several classes for which they have taken tickets; and those who will be consi-

dered to have complied with the regulations of the court, whose names and classes in the Register correspond with the testimonials of the teachers. The book will be open for the registration during the first twenty-one days of the months of February, June, and October, from nine until two."

While I offer my testimony to the proof which this, among other excellent regulations, affords of the unabated zeal of the Court of Examiners of the Apothecaries' Company, I would wish to call their attention to one circumstance which I think admits of some improvement,—I mean the examination of candidates (after an apprenticeship of *five* years, duly certified, and after *two* years' attendance on lectures and hospitals, also duly certified) in—what do you think, Mr. Editor?—in *translating Physicians' Prescriptions*. What should we think of the University of Cambridge giving out a decree, "that all candidates for the degree of A.B. after the 1st of January, 1831, should be examined, first in the spelling-book, and afterwards in Xenophon's *Anabasis*, Robertson on *Conic Sections*, and Locke on the *Human Understanding*?"

Surely, sir, either this part of the student's trial should be dispensed with altogether, or the Court of Examiners should inquire into this matter *prior to the act of registration*. I can never bring myself to think that the Apothecaries' Company are right in tacitly assenting to the education of a youth in the higher branches of physic when, after an apprenticeship of *three* years at the least, he is incapable of translating a physician's prescription.

I am, Sir,

Your obedient servant,
A MODERATE INNOVATOR.

London, January 25, 1831.

ROYAL INSTITUTION,

Friday, Jan. 21, 1831.

HIS GRACE THE DUKE OF SOMERSET,
PRESIDENT, IN THE CHAIR.

Mr. Faraday on a peculiar class of Optical Deceptions.

THIS being the first meeting of the present session, Mr. Faraday very properly both prefaced and concluded his observations by reminding the members, that the committee appointed to super-

intend the *conversazioni* could distribute no more than the members placed at their disposal, and hence it behoved all who enjoyed and partook of these intellectual pic-nics, not to relax in their exertions to bring together objects of general interest, either for exhibition in the library, or for discussion in the theatre.

The subject proposed was well chosen for an introductory meeting, being one of very general and popular interest: indeed, optical deceptions are so numerous and so various, the principles on which they are explained so conclusive and interesting, and the experiments by which they may be illustrated so beautiful and imposing, that we cannot be surprised such should long have been favourites; and equally so with the philosopher as with the world at large.

The wisdom of our ancestors declared that "seeing is believing;" but so often do our other senses not only correct, but contradict our sense of sight, that it was a pertinent question of the boy whom Cheselden couched, as to which was the *lying* sense. Indeed, so often do our eyes deceive us, that the old proverb may not unfrequently be reversed, and read that "seeing is *not* believing;" and hence it is important that all such apparent paradoxes as continually occur should be as continually explained.

The optical deceptions to which Mr. Faraday drew the attention of the meeting, are closely allied to those which Dr. Roget so well explained in the *Philosophical Transactions* for 1805, and of which some account was likewise published in the 10th volume of the *Journal of Science*, to which we refer our readers. Indeed, few persons can have looked through Venetian blinds, palisadings, or other similar interstices, at wheeled carriages moving past them, without being struck with the apparent paradox, that the spokes of the wheels, which are known to be straight, seem all, when thus viewed, invariably curved.

But the fact to be now more particularly explained was one pointed out to Mr. Faraday by the proprietor of the lead-mills, near Waterloo Bridge, who to his surprise had noticed that two of the wheels, which were placed side by side in the machinery, of equal diameter, and moving at equal rates, though in opposite courses, when viewed in certain aspects were apparently motion-



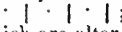
less at the time they were in truth revolving with very considerable rapidity; or rather, when attentively considered, there was the spectrum of one motionless wheel instead of two in rapid motion.

This same circumstance had likewise been observed, as Mr. F. afterwards learned, by Mr. Brunel in the works of the Thames Tunnel, in which two wheels for the return of ropes had been placed under similar circumstances.

The rationale of this phenomenon is extremely simple, although not easy to be explained without apparatus, or more numerous diagrams than our space can possibly admit. We will try, however, if the printer's types will serve us: for the entire explication rests on the well-known law of vision, that each impression made upon the retina is for a short time permanent, so that if succeeding impressions be made before the preceding have become obliterated, a continuous perception will be the result, for that which is true of one point is also true of all the rest: and this is well shewn by the familiar experiment of whirling a luminous point in a circle, when a circle of light is perceived. The same law has been also elegantly illustrated by that very philosophical toy, the thanatrope, in which on the two sides of a card are drawn the disjecta membra of the human form; thus the head and legs and arms on one side, with the trunk and feet and hands on the other, which card, when twirled with due rapidity, gives the perception to the eye of a complete and elegant drawing, for the impressions of the one side are effected before those of the other have become effaced.

Yet it is not light only or bright colours which make impressions on the retina—the absence of light or dark hues are likewise appreciated by that organ, so that if a wheel with spokes and cogs be put in rapid motion, the cogs, which we will suppose to be white, revolving over a black field, will contrast strongly with their dark interstices, and although from the rapidity of the wheel's motion the cogs become imperceptible, and the outline of the wheel a regular circle, still the hue or tint of this circle made from the cogs will be different from that of the felloes of the wheel for the white of the cogs, will become mingled with the interstitial black, so that the appearance will

be that of a white wheel with a grey circumference, and if the wheel have spokes and interstices between them, that part will also be grey, while the nave and the felloes are white.

Now if two such wheels be moving with equal rapidity in parallel planes, it is evident that there will be certain points in the field of vision in which their cogs and spokes will be opposite to each other, and certain others in which their cogs and spokes will rapidly traverse their interstitial spaces: *e. g.* let two pieces of card, cut thus  , represent sections of the periphery of the two wheels, and let them be passed the one over the other. It will be found that points in the field behind them may be alternately marked with dots and lines, thus ; the lines being those which are alternately covered and uncovered by the cogs and spokes, the dots being those which are begun to be covered by a succeeding cog of the hind-wheel before the preceding cog of the front-wheel had left it; so that it is evident that certain fixed points in the field of vision will forward continuous impressions to the eye of white, and others alternate impressions of white and black; but as the motion of the wheels will, from their rapidity, mingle the black and white to form a grey impression, the result is, that these two white wheels, moving over a black ground, will form a motionless spectrum of a white wheel with grey interstices, as the same impressions will be always forwarded from the same points of the field of vision; which, in fact, is the phenomenon sought to be explained. It must likewise be observed that the cogs and spokes of the spectral wheel must be wider than those of the real wheels, and must also be shaded off at their edges, which is another circumstance that experience attests.

Many beautiful illustrations of this principle may be readily designed. Mr. Faraday selected a few which were much admired: for when the wheels are caused to revolve with unequal as well as with equal velocities when the cogs and spokes are curved either the same or opposite ways, or when the centres of the wheels are variously intersected, the effects are magically beautiful. Many of them reminded us of those mechanical exhibitions which add so

much to the effect of the more splendid scenes of our most gorgeous pantomimes; and we doubt not, now that the principle has been fairly explained, our artists will avail themselves of it for the advantage of the theatre.

In the Library we examined, with much pleasure, Bregnet's metallic thermometer; an ingenious application of the different expansibilities of metals by heat, to the purposes of an index of temperature.

There was likewise on the table, among many other curiosities of nature and works of art, a splendid specimen of American glass-casting and moulding; which will doubtless, from its much reduced price, in a very short time supersede the use of cut glass.

On Friday, 28th inst., Mr. Ainsworth will bring forward the question as to how far we are enabled to "determine the age of rocks of supposed igneous origin."

ANALYSES & NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

The Life of Sir Humphry Davy, Bart. LL.D. late President of the Royal Society, Foreign Associate of the Royal Institute of France, &c. &c. &c. By JOHN AYRTON PARIS, M.D. Cantab. F.R.S. &c. Fellow of the Royal College of Physicians. 4to. pp. 547.

[Continued from page 529.]

Effects of inhaling Nitrous Gas.

'HAVING observed,' says Davy, 'that no painful effects were produced by the application of nitrous gas to the bare muscular fibre, I began to imagine that this gas might also be breathed with impunity, provided it were possible in any way to free the lungs of common air before inspiration, so as to prevent the formation of nitrous acid.'

'On this supposition, during a fit of enthusiasm produced by the respiration of nitrous oxide, I resolved to endeavour to breathe nitrous gas; one hundred and fourteen cubic inches of it were accordingly introduced into the large mercurial air-holder; two small silk bags of the capacity of seven quarts were filled with nitrous acid.'

'After a forced exhaustion of my lungs, my nose being accurately closed, I made three inspirations and expirations of nitrous oxide in one of the bags, in order to free my lungs, as much as possible, from atmospheric oxygen; then, after a full expiration of the nitrous oxide, I transferred my lips from the mouthpiece of the bag to that of the air-holder, and turning the stopcock, attempted to inspire the nitrous gas. In passing through my mouth and fauces, it tasted astringent and highly disagreeable; it occasioned a sense of burning in the throat, and produced a spasm of the epiglottis, so painful as to oblige me to desist immediately from attempts to inspire it. After removing my lips from the mouthpiece, when I opened them to inspire common air, *nitrous acid* was immediately formed in my mouth, which burnt the tongue and palate, injured the teeth, and produced an inflammation of the mucous membrane, which lasted for some hours.'

'As, after the respiration of nitrous oxide, a small portion of the residual atmospheric air always remained in the lungs mingled with the gas, so it is probable that, in the experiment just related, a minute portion of nitrous acid was formed; and, if so, I perhaps owe the preservation of my life to the circumstance: for, supposing that I had succeeded in taking a full inspiration of nitrous gas, and even that it had not produced any positive effects, it is not likely that I should, by breathing nitrous oxide, have so completely freed my lungs from it as to have prevented the formation of nitrous acid, when I again inspired common air. I never design again to attempt so rash an experiment.'

Effects of Inhaling Carburetted Hydrogen.

His attempt to breathe carburetted hydrogen gas was scarcely less terrific and appalling.

'Mr. Watt's observations on the respiration of diluted hydro-carbonate by man, and the experiments of Dr. Beddoes on the destruction of animals by the same gas, proved that its effects were highly deleterious.'

'As it destroyed life, apparently by rendering the muscular fibre irritable, without producing any previous excitement, I was anxious to compare its sensible effects with those of nitrous oxide, which at this time I believed to

destroy life by producing the highest possible excitement.

'In the first experiment, I breathed for nearly a minute three quarts of hydro-carbonate, mingled with nearly two quarts of atmospheric air. It produced a slight giddiness, pain in the head, and a momentary loss of voluntary power; my pulse was rendered much quicker and more feeble. These effects, however, went off in five minutes, and I had no return of giddiness.

'Emboldened by this trial, I introduced into a silk bag four quarts of gas nearly pure, which was carefully produced from the decomposition of water by charcoal an hour before, and which had a very strong and disagreeable smell.

'My friend, Mr. James Tobin, junior, being present, after a forced exhaustion of my lungs, the nose being accurately closed, I made three inspirations and expirations of the hydro-carbonate. The first inspiration produced a sort of numbness and loss of feeling in the chest, and about the pectoral muscles. After the second, I lost all power of perceiving external things, and had no distinct sensation, except that of a terrible oppression on the chest. During the third expiration, this feeling subsided, I seemed sinking into annihilation, and had just power enough to cast off the mouthpiece from my unclosed lips.

'A short interval must have passed, during which I respired common air, before the objects around me were distinguishable. On recollecting myself, I faintly articulated, 'I do not think I shall die.' Placing my finger on the wrist, I found my pulse thread-like, and bearing with excessive quickness. In less than a minute I was able to walk, and the painful oppression on the chest directed me to the open air.

'After making a few steps, which carried me to the garden, my head became giddy, my knees trembled, and I had just sufficient voluntary power to throw myself on the grass. Here the painful feelings of the chest increased with such violence as to threaten suffocation. At this moment I asked for some nitrous oxide; Mr. Dwyer brought me a mixture of that gas with oxygen, and I breathed it for a minute, and believed myself recovered.

'In five minutes the painful feelings began gradually to diminish; in an

hour they had nearly disappeared, and I felt only excessive weakness and a slight swimming of the head. My voice was very feeble and indistinct.

'I afterwards walked slowly for half an hour with Mr. Tobin, and on my return was so much stronger and better as to believe that the effects of the gas had entirely passed off; though my pulse was 120, and very feeble. I continued without pain for nearly three quarters of an hour, when the giddiness returned with such violence as to oblige me to lie on the bed; it was accompanied with nausea, loss of memory, and deficient sensation.

'In about an hour and a half the giddiness went off, and was succeeded by an excruciating pain in the forehead, and between the eyes, with transient pains in the chest and extremities.

'Towards night these affections gradually diminished; and at ten no disagreeable feeling, except weakness, remained. I slept sound, and awoke in the morning very feeble and very hungry. No recurrence of the symptoms took place, and I had nearly recovered my strength by the evening.

'I have been minute in the account of this experiment, because it proves that hydro-carbonate acts as a sedative, that is, it produces diminution of vital action, and consequent debility, without previously exciting. There is every reason to believe that, had I taken four or five inspirations, instead of three, they would have destroyed life immediately, without producing any painful sensation.'

The scientific and medical world are alike indebted to Davy for this daring experiment: and, if the precautions it suggests be properly attended to, it may become the means of preserving human life. The experiment is also valuable as affording support to physiological views, with which its author was probably not acquainted.

In the first place, it may be necessary to apprise some of my readers, that the "hydro-carbonate" here spoken of, differs very little from the gas now so generally used to illuminate our streets and houses. We have just seen how deadly are its qualities, and that even in a state of extreme dilution it will affect our sensations. The question then necessarily suggests itself, how far this gas can be safely introduced into the interior of our apartments?

Did we not possess any direct evidence upon the subject, the answer would be sufficiently obvious, since it is impossible so to conduct its combustion that a portion shall not escape unburnt. Such is the theory; but what is our experience upon the subject?—that pains in the head, nausea, and distressing languor, have been repeatedly experienced in our theatres and saloons, by persons inhaling the unburnt gas; that the atmosphere of a room, although spacious and empty, will, if lighted with gas, convey a sense of oppression to our organs of respiration, as if we were inhaling an air contaminated with the breath of a hundred persons.

In the next place, Davy's experiment is important inasmuch as it proves that, in cases of asphyxia, or suspended animation, there exists a period of danger after the respiration has been restored, and the circulation re-established, at which death may take place, when we are the least prepared to expect it.

Bichat has shewn that, when dark-coloured blood is injected into the vessels of the brain by means of a syringe connected with the carotid artery, the functions of the brain become immediately disturbed, and in a short time entirely cease; the effect is precisely similar, whether the dark-coloured blood be transmitted to the brain by the syringe of the experimentalist, or by the heart itself. Thus in cases of asphyxia, the dark-coloured blood which has been propelled through the vessels during the suspension or imperfect performance of respiration, acts like a narcotic poison upon the brain; and no sooner, therefore, does it extend its malignant influence to that organ, than deleterious effects are produced, and the animal, after apparent recovery, falls into a state of stupor, the pupils of the eyes become dilated, the respiration laborious, the muscles of the body convulsed, and it speedily dies, poisoned by its own blood.

We are much indebted to Mr. Brodie for a series of experiments in confirmation of these views; and a very interesting case occurred some time since, in the neighbourhood of Windsor, which is well calculated for their illustration. A corporal in the guards, whose name, if I am not mistaken, was Schofield, was seized with cramp as he was bathing in the Thames, and remained for several minutes under water.

By judicious assistance, however, he was recovered, and appeared to those about him to be free from any danger, when he was attacked by convulsions and expired. Had the respiration been artificially supported at this period, so as to have maintained the action of the heart until the black blood had returned from the brain, the life of the soldier might possibly have been saved.

Davy and Wollaston compared as Experimenters.

The chemical manipulations of Wollaston and Davy offered a singular contrast to each other, and might be considered as highly characteristic of the temperaments and intellectual qualities of these remarkable men. Every process of the former was regulated with the most scrupulous regard to microscopic accuracy, and conducted with the utmost neatness of detail. It has been already stated with what turbulence and apparent confusion the experiments of the latter were conducted; and yet each was equally excellent in his own style; and, as artists, they have not unaptly been compared to Teniers and Michael Angelo. By long discipline, Wollaston had acquired such power in commanding and fixing his attention upon minute objects, that he was able to recognize resemblances, and to distinguish differences, between precipitates produced by re-agents which were invisible to ordinary observers, and which enabled him to submit to analysis the minutest particles of matter with success. Davy, on the other hand, obtained his results by an intellectual process, which may be said to have consisted in the extreme rapidity with which he seized upon, and applied, appropriate means at appropriate moments.

Many anecdotes might be related, in illustration of the curiously different structure of the minds of these two ornaments of British science. The reader will, in the course of these memoirs, be furnished with sufficient evidence of the existence of those qualities which I have assigned to Davy; another biographer will no doubt ably illustrate those of Dr. Wollaston.

I shall only observe, that to this faculty of minute observation, which Dr. Wollaston applied with so much advantage, the chemical world is indebted for the introduction of more simple

methods of experimenting—for the substitution of a few glass tubes, and plates of glass, for capacious retorts and receivers, and for the art of making grains give the results which previously required pounds. A foreign philosopher once called upon Dr. Wollaston with letters of introduction, and expressed an anxious desire to see his laboratory. ‘Certainly,’ he replied; and immediately produced a small tray containing some glass tubes, a blow-pipe, two or three watch-glasses, a slip of platinum, and a few test bottles.

Wollaston appeared to take great delight in shewing by what small means he could produce great results. Shortly after he had inspected the grand galvanic battery constructed by Mr. Children, and had witnessed some of those brilliant phenomena of combustion which its powers produced, he accidentally met a brother chemist in the street, and seizing his button (his constant habit when speaking on any subject of interest), he led him into a secluded corner; when, taking from his waistcoat pocket a tailor’s thimble, which contained a galvanic arrangement, and pouring into it the contents of a small phial, he instantly heated a platinum wire to a white heat.

There was another peculiarity connected with Wollaston’s habit of minute observation: it enabled him to press into his service, at the moment, such ordinary and familiar materials as would never have occurred to less observing chemists. Mr. Brande relates an anecdote admirably calculated to exemplify this habit. He had called upon Dr. Wollaston to consult him upon the subject of a calculus;—it will be remembered that neither phosphate of lime, constituting the ‘bone earth’ species, nor the ammoniaco-magnesian phosphate, commonly called the ‘triple phosphate,’ is *per se* fusible; but that when mixed, these constitute the ‘fusible calculus’ which readily melts before the blow-pipe. Dr. Wollaston, on finding the substance under examination refractory, took up his paper folder, and scraping off a fragment of the ivory, placed it on the specimen, when it instantly fused.

MEDICAL GAZETTE.

Saturday, January 29, 1831.

“*Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso.*”—CICERO.

ABOLITION OF LATIN EXAMINATIONS.

THE condition, upon which the College of Physicians in Ireland have abandoned the practice of examining candidates through the medium of Latin, is, we understand, that each candidate, if he be not a graduate in arts of one or other of the three universities of Oxford, Cambridge, or Dublin, shall give proof of his classical acquirements in an examination expressly directed to that object. In the University of Dublin, the professors of the school will henceforth examine the aspirant for medical honours without encumbering either themselves or him with the shackles of a dead language: that the candidate, however, in this instance be a classical scholar is sufficiently guaranteed by the fact that he must have previously taken a degree in arts in that university where classical literature is so highly prized and held indispensable for graduation.

The Dublin folk have acted wisely—they have done well.

We strenuously advocated on a former occasion the propriety of the step which has just been taken in the sister kingdom: we recommended it to the serious consideration of those who we knew had influence in the reformation of old abuses, but we candidly confess we had little hope of our voice being listened to in the “ancient seats of learning,” deploring, as we did, the death-gripe pertinacity with which relics of the olden customs are retained in those all-hallowed spots. Time, to be

sure, "which innovateth greatly," has been gradually doing his work; nor should we vainly arrogate to ourselves the credit which is so essentially due to him: but we would still fain flatter ourselves that we have done something—that we have even given him some small stimulus to help him on in the gait that he was going.

And now that those Latin examinations—those honoured heirlooms of the wisdom of our ancestors—have been dispensed with in one of the universities—who is there that will argue that they ought to be maintained in the others; and if not in these, that they should be so in establishments of inferior importance? For our parts, we have never been so fortunate as to extract from their defenders any one argument in favour of the "good old custom," except that it tended to keep up *the consequence* of the body which maintained it: it conferred a sort of learned character—dignity, in short, upon the whole tribe of Latin examiners—upon the heads, and by implication, upon all the members of the profession. This, however, happens to be only a mistake. We have met with but few who, being competent to form an opinion about the matter, do not look upon the whole affair as perfectly ludicrous. No one thing, assuredly, about our profession is so rich in its sources of amusement as those occasional exhibitions of stammering talent—those curvetings in chains—through which an entrance into our ranks is effected. Is there a man that has passed the *ordeal*, who has not something comical to relate about it—some "bene respondere" for his examiner—some "postea seignare," "ensuita purgare," for himself? The *Sieur de Poquelin*, after nearly two centuries of repose, would rise from his grave, with no small degree of merriment, were he permitted to witness the scenes we allude to: he

might, we think, improve both his satire and his latinity by studying some of the characters with which our times would supply him.

But, seriously speaking, is this most questionable dignity, which is supposed to be attached to the voluble speaking of an obsolete idiom, an equivalent for the inconveniences to which it gives rise? or was this same questionable dignity the end and aim for which those stately colloquies were originally instituted? We should think that a formal reply to either of these questions were scarcely requisite. The origin of Latin examinations is, as every body knows, traceable to those times when people seem to have had, though less refinement, perhaps just as much common sense as ourselves. The Latin was then the ordinary medium of intercourse between all who pretended by education to be raised above the common herd; it was the language of lectures and of books. The terms of art, the descriptions in the anatomy and physiology of the day, and the names of things connected with the science of disease, were all couched in the same idiom. The mother tongue was defective in the necessary means of expression; and it was ordained, as a matter of course, that the proficiency of candidates who aspired to the honours of the profession should be ascertained through the ordinary language of literature and science. But who is there now so ignorant as not to know that this necessity no longer exists—that what was once a matter of course has long ago become a matter of absurdity—that, so far from being obliged to call in the aid of the Latin in the penury of our mother tongue, things are now totally reversed; and yet that (through some feeling, whether of respect for the wisdom of antiquity, or rather, as we have seen, from a notion of the dignity attached to the circumstance) we are content to give up the

inexhaustible resources of a vernacular, at once rich, copious, and the most expressive in the world, to permit ourselves to be fettered with a language which, be it observed, arrived at its most complete and perfect form full two thousand years ago?

We have already, we hope, sufficiently guarded ourselves from the imputation of being indifferent to the excellencies of classical literature. We have already said, and we repeat it, that as a branch of general knowledge, and as the best basis for the superstructure of a complete medical education, we hold an acquaintance with the Latin and Greek classics to be perfectly indispensable to the accomplished practitioner, both as a gentleman and a scholar. A familiarity with the classical writers of Greece and Rome will impart to his mind an elegance and elevation of sentiment—will improve his reasoning powers, and bestow on him a command of language scarcely attainable from any other source; nor can we adequately express our regret that its importance seems of late to be so much overlooked in the numerous schemes for the improvement of medical education which so copiously issue from the press. But what, in the name of common sense, is there akin between this accomplishment and the ability of acquitting one's self well upon an examination for medical honours conducted under the present system? It is a generally received opinion among those who are most conversant with the philosophy of mind, that, in order to give utterance intelligibly to the ideas which we mean to express, we should be able to think in the very words and language which we employ. How many of us, even the most classical of our acquaintances, do this with regard to the Latin, we will not venture to assert; but we believe it will be admitted without hesitation, that the great majority of candidates perform the

business of double translation before they reply to any single interrogatory proposed to them. This, to be sure, increases the difficulty of the test to which the candidate is submitted, by creating for him considerable embarrassment, and so far may be unobjectionable, inasmuch as his merit, if merit he have, must discover itself through the thick disguise in which it is designedly wrapt up. It may do more—it *may* (we will admit it for the argument's sake)—it may afford some proof of familiarity with the language in question—it may even test the classical knowledge of the candidate, —though notoriously in no very competent way, when we recollect the services bestowed on these occasions by certain eminent personages, known by the name of *grinders* and *crammers*. But in what degree does it tend to carry into effect the main object of the examination—how does it contribute to display the *scientific* merits of the candidate? It is a thing well understood, on the contrary, that those Latin examinations, under the colour of a display of science, contribute in no small degree to blindfold both the examiners and those who may happen to be present at the exhibition. Yet it is not difficult to conceive—nay, it is tolerably well understood by most of our readers, how, in examinations of this sort, the faltering and imperfect expression of a candidate, proceeding generally as much from ignorance of his business as from the difficulty of using a language which he is obliged to speak, perhaps for the first and only time in his life, is but too frequently imputed to the latter cause; while, on the other hand, an assumed boldness and flippancy will most assuredly carry a more confident, though, peradventure, an equally ill-prepared candidate, over a multitude of errors and mistakes; and all this, even supposing the examiners themselves to be the best prepared in the world for judg-

ing of merit through the medium of an "unknown tongue."

We have said that the custom of Latin examinations does not expedite the display of scientific talents: we might say more, and remind our readers of numerous instances in which this clog has so encumbered the mental machinery of candidates, that those even of first-rate and acknowledged ability have frequently exhibited the most perfect failures—what with the indignation of being so fettered—and what with, perhaps, positive incompetency in the means of employing the instrument upon which they were obliged to perform—many are known to have completely broken down. And we doubt whether Sir Humphry Davy himself would have come off creditably, were he obliged to submit to an examination even in his own peculiar science—if it were to be conducted through the medium of the Latin language. That he could never manage to speak the French with correctness and fluency, we are informed by his excellent biographer: he had, it appears, no power of language, or facility of expression, when deprived of the use of his native tongue: what, then, might not have been his condition were he obliged to undergo the ordeal of a Latin scrutiny? Or can we not readily imagine, what should have been the fate of John Hunter were he put to the test in a similar way?

But the propensity to persevere in the practice, is, we are happy to find, gradually growing more and more feeble; and the occasion which has called for these remarks, is a signal proof of the commencement of a new and better way of thinking. There will positively be no loss incurred by the abandonment of the olden habit; for the Latin has long ceased to be the familiar language of the learned. We have heard it said that it "aided the great Bacon in pointing out

the road to truth, and Newton and Galileo in recording their success in attaining it." Nothing can be more erroneous—not one of these great philosophers "thought out" their discoveries in Latin, nor did they take immediate record of them in that language, and this at a time long before the Latin idiom had ceased to be the medium of instruction in the schools: their discoveries, and their dictates of wisdom, were given to the world *necessarily* in the garb of the learned, but that garb was first put on by their Latin secretaries and professed translators. Nor can we think that the discontinuance of the practice will in the slightest degree affect the interests of classical learning: the contrary opinion is, in truth, the one that we are most decidedly disposed to adopt. The foolery, and affectation, and air of pretension about the existing mode of examination being removed, the occasion of ridicule and censure will also, in a great degree, be removed, and the inadequate test by *rote* being dispensed with, and a better and more direct one for the ascertainment of classical ability being set up in its place, we have no doubt but that every thing will be set on a right footing, and proceed in proper order.

SINGULAR AUTOPSY—SPONTANEOUS COMBUSTION.

[The following is the case to which our Paris correspondent alluded in his letter of last week. The particulars are so very curious that we lose no time in laying them before our readers; but we shall only observe, for the present, that those who ventured to assert (that is, supposing the narrative to be trustworthy, and we see no reason to question it) that the appearances here detailed were not indicative of a state adapted for combustion, seem to

us to have been rather premature in their conclusions: we are, for our part, rather disposed to consider the case as in no small degree illustrative of that mysterious subject, the spontaneous combustion of the human body.]

Académie Nationale de Médecine,
Jan. 4, 1831.

A man who had been labouring under severe illness for about a fortnight, and keeping his bed for the last three or four days of that time, was taken into the Hotel Dieu, under the care of M. Bally. His complaint began with a headache, followed by colicky pains and diarrhœa, which lasted for three days. On his entering the hospital, it was remarked that his left thigh and scrotum were swollen, and his respiration short and impeded; but he complained of nothing, save a sensation of fatigue in his lower limbs, by reason of which he was unable to support himself without difficulty. While under the influence of a delirium that lasted for some moments, he asserted that he had been bitten in the leg by a dog, but there was no trace whatever in the part of any such accident having occurred. The man died in the night, and eight hours afterwards was examined. The bed on which the body lay was stained with blood, which had transuded from the thighs and trunk. In the nasal cavities also was contained some glutinous blood. The whole body was emphysematous, violet-coloured, and marked with a vesicular eruption in detached patches, the vesicles filled with a reddish serum mixed with a gas. There was nothing but gas in those vesicles that were white. The left leg and thigh were more swollen and puffy than those of the other side; and they fluctuated on percussion. The abdomen was considerably distended with gas. The livid scrotum sounded like a drum; but the tympanitic affection belonged entirely to the peritoneum, not to the intestines. The brain and spinal marrow were apparently healthy. All the large vessels of the pia mater were filled with air. The lungs were sound and crepitating; the heart pale, flaccid, but full of blood. There were no traces of hemorrhage discoverable in the interior; so that the blood which made its appearance on the outer surface of the body could only have come from the external

eruption. In the great intestine there were found some ulcerated tubercles, but they did not go deeper than the mucous coat. The blood seemed to be all infiltrated into the surface of the limbs and the cellular tissue. Some deep incisions were made into the puffy places, upon which there issued forth a gas that took fire the moment a bougie was applied to it. This experiment was repeated several times with the same result. But what was still more curious, a bougie having been presented to a perforation in the abdomen, a beautiful tuft of flame was formed, the base of which was blue and the top white, while the orifice itself from which it issued became incinerated. At the same time, it was remarkable that the gas contained in the intestines had no disposition whatever to be converted into flame.

This was M. Bally's case, upon the singularity of which the learned gentleman insisted. Of the cause of the singular appearances which it presented he would pretend to give no explanation; the man had not been bitten by any animal, neither was he a person given to intoxication; but M. Bally was inclined to think that the circumstances were all favourable to M. Marc's opinions about the spontaneous combustion of the human body. He would go farther and say, that a single electric spark would have been enough to have caused the patient to suffer as did the Italian priest, whose shirt and cap were burned, and who eventually lost his life, in a well-known case of spontaneous combustion.

A long discussion ensued upon the recital of the case, in which MM. Bouillaud, Rochoux, Louis, Emery, Naquart, and Moreau, successively took a part; but these gentlemen were pretty generally inclined to think that there was little or no analogy between this and any of the cases of spontaneous combustion on record. They were rather disposed to say that the development of the gas was not a pathological, but purely a chemical phenomenon—the result of putrefaction; and putrefaction, they thought, might set in before life was extinct, of which some cases in point were cited.

REPORTS OF CASES OCCURRING
AT PUBLIC INSTITUTIONS.

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE,

DELIVERED BY DR. ELLIOTSON,

January 17, 1831.

Conclusion of Cases formerly admitted—Ovarian Dropsy—Enlargement of the Liver, with Ascites—Pediculi—Dyspepsia, with Palpitation—Erysipelas—Spasmodic Cough—Paralysis Agitans—Miscellaneous Cases.

I was finishing, gentlemen, in the last lecture, the cases which would have been spoken of a fortnight ago, had it not been Christmas week; but two or three remained unmentioned.

One was a case of *continued fever* in a woman, but there was nothing particular in it. It occurred with the usual symptoms, and was cured in my usual way.

Another was a case of *acute rheumatism* among the women, which also occurred with the usual symptoms, and presently yielded to the free exhibition of *vinum rudicis colchici*.

A third was a case of *asthma* among the men, which arose from *chronic bronchitis*. A great number of cases of what is called *asthma* are nothing more than *chronic bronchitis*; and even where patients have *spasmodic difficulty of breathing*, in a great number of instances *chronic bronchitis* is united with it, and is its foundation and groundwork. When the bronchial tubes are in a state of *chronic irritation*, or *inflammation*, they are often thrown, from time to time, into *spasm*, and persons consequently experience *paroxysms of dyspnoea*. We daily see cases of *spasmodic difficulty of breathing* united with *chronic irritation* and an *inordinate secretion* of the mucous membrane; and from the disease being so common I shall say nothing about this particular case.

A woman with *ovarian dropsy* went out of the hospital that week. You will recollect that a woman was admitted a few days before, of very large size, who had been twice tapped. Her size was immense, and her health did not particularly suffer; it was evident from this circumstance, as well as from the disease having begun on one side, low down, that the dropsy was *ovarian*. When the dropsy is *peritoneal*, the health suffers infinitely more than when it is *ovarian*. The ovary is a part not necessary to life; indeed, it is out of the way of external injury, and liable neither to mechanical violence, like the brain, for instance, nor to injury of our own infliction like the stomach, which suffers from improper ingesta, or like the heart,

which suffers from violent exercise; nor is it, like the lungs, exposed to mischief from improper temperatures. It has few morbid sympathies, and a woman, so far as her own being is concerned, would do as well without it as with it. When the dropsy is *peritoneal*, connected as that membrane is with the stomach, intestines, and other important viscera, so as to form a part of them, great injury is occasioned; indeed, it is usually accompanied by *visceral disease*. This woman's health suffered but very little. It did not appear in this case that the whole of the ovary was one sac, and for this reason—when ever she was tapped a considerable tumor still remained. She informed me that she had been tapped twice, and each time had very soon become as large as before.

You may learn from this case, what I think is a well ascertained fact, that when a woman with *ovarian dropsy* has been once tapped, the tendency to accumulation is increased to a very high degree. A woman, if she be not tapped, may go on for a great length of time. I have known the disease go on fifteen years, gradually increasing all the time, but very slowly. A woman without tapping, however slowly she may have increased before, will, if you tap her, increase very rapidly, and therefore it should be a rule never to tap a case of *ovarian dropsy* till the distention is such that the operation is indispensable. You will afterwards have to operate again and again; the tendency to secretion becomes so very great. Of course it is necessary to tap a patient if there be great pain from distention, which cannot be relieved by medicine or topical means; but you will find generally, I will not say *universally*, that when an ovary has been once tapped, the fluid accumulates in a ten-fold degree.

This woman had never been pregnant. You will find that a great number of women with *ovarian dropsy* are single women, or if they have been in the way of impregnation, it has never answered. The ovaries are generally *indisposed* to the performance of their functions, and *disposed* to disease. This woman was thirty-one years of age; she had been married thirteen years, but had never been pregnant. The dropsy had existed fourteen months, and she had been tapped twice. The last time she had been tapped was three weeks before her admission, and she had been tapped only three weeks before that for the first time. She had gone on for upwards of twelve months without being tapped; but having been once tapped she was obliged to undergo the operation again in three weeks; and then, in three weeks more, she was in such a state of distention that I found it necessary to have her tapped soon after her admission into the hospital. She wished to be tapped imme-

diately; I, however, put her off as many days as I could, to give her a chance of absorption of the fluid; but at length I was compelled to have recourse to the operation.

When the fluid was let out, I believe about twenty-nine pints came away, but there still remained a considerable tumor within the abdomen, exactly as she said had been the case after the two previous operations. It seemed that one part of the ovary had formed a large sac, while other parts formed also other sacs. In some of these cases, in which a tumor remains after the operation, you will have an enlarged ovary and ascites around it—I should say ascites of the peritoneum, for they are both called ascites; there is ascites of the ovarium, and ascites of the peritoneum,—besides the disease of the ovarium, whether dropsy or solid enlargement, you will sometimes find dropsy of the peritoneum. In that case, however, the health materially suffers—the patient does not last so long as in a case of this description. I should imagine, therefore, from the very fair, I may say *good*, state of health of this patient, that she was not labouring under dropsy of the peritoneum; but I am not *absolutely* certain. It might either be dropsy of the peritoneum around a diseased ovary, or one portion of the ovary might be far more distended than the rest; the fluid of this part being unconnected with that of the rest of the organ.

I was beginning to rub upon the abdomen, for an hour night and morning, the hydriodate of potash, in the form of ointment, made with a drachm to an ounce of adeps, and to give her internally the solution of the hydriodate of potash made with a drachm to an ounce of distilled water. I began with fifteen minims three times a-day, and had increased the dose to forty-five minims three times a-day. There are people now in the house who are taking much above one hundred minims three times a-day. I believe if any medicine does good in these cases, it is iodine. It is wrong, in a case of dropsy of the ovary, to give violent purgatives and diuretics, for they will all fail; and mercury will do no good, but assist in breaking up the constitution. If iodine did not exist, I would not use any medicine at all in these cases, for, excepting it, I never saw any, of whatever kind, do the least good. I have seen cases diminished, and some apparently cured, by this remedy: but of course we are not to expect great success, because so large a mass of disease frequently exists that it would be too much to suppose that this or any other medicine would cause its absorption. However there is a woman now in the house who has had the disease four years, and lies a bed or two distant from where this woman lay, and whose abdomen is steadily diminishing under the internal and

external use of iodine; but whether the disease will entirely yield or not, I do not know.

I may mention that I recollect perfectly well attending a case of this description, which was decidedly a combination of diseased ovary—solid enlargement of the ovary, and dropsy of the peritoneum. It occurred in a young lady. The abdomen had enlarged first on one side, and presented a solid circumscribed tumor; but by degrees the whole of the abdomen increased together, and fluctuation was perceptible. Her health declined very much, and it was at length necessary to tap her, and the moment the operation was performed and the fluid let out, a tumor was perceptible on one side, as large as the heads of two infants placed in their vertical line together, projecting considerably forwards. After a time the water again accumulated in the peritoneum, the circumscribed tumor was lost, and tapping was required again, when the tumor again came into view. The operation was performed several times, and finally she died. The case made an impression on me from the circumstance, that a man was called in who has since become very notorious for his cases. I considered it my duty to inform the friends that a surgeon must attend, and let out the fluid from time to time, by which means the life of the patient would be protracted, but as for curing the disease, it was out of the question. This was my duty, that, if my attendance was commanded, it might not be in the hope of my curing the case. An honest opinion of this kind was not acceptable, or believed, and a man of art, not of science, was called in, who of course said he could effect a cure, and of course, from the impudent positiveness of his declaration, he was at once believed. He immediately began to rub the lady's abdomen. I was asked to meet him, but declined. I begged to retire while he had the charge of the case, but if ever they should again require my assistance, I expressed a readiness to attend immediately. He accordingly took the case under his care, and commenced the same evening by rubbing, and when he had rubbed and wiped the abdomen, and even his cups clean, he told the patient (as she informed me herself) that he had *killed the lump*. He attended the next day, and rubbed again, and then he told her, when the second rubbing was over, that he had reduced the tumor *one-third*! He rubbed again in the middle of the day, and then he said he had reduced the tumor *one-half*! He continued rubbing three times a-day, but what the progression of diminution was, I do not know. The fact, however, was, that the water soon accumulated in the peritoneum again, and enveloped the tumor as it had done before, and he might have said the *lump* was entirely gone, or split in twenty pieces, and

no one could have contradicted him, for the immense body of water collected around the tumor completely prevented all examination. He went on in this way, and now the time arrived for her to be tapped again. I was again sent for, and a very eminent surgeon of another hospital attended with me, who had always tapped her before. The man who had been called in wished to bring his own surgeon, who it was to be I do not know, but the family would not allow the operation to be performed by a stranger. The surgeon who attended with me was not to be told that this worthy man had been called in, and I kept it a secret from him; and he was then to give his honest opinion as to whether the tumor was larger or smaller than when he last tapped the patient. The tumor I saw, as the water flowed, was become larger, and when the water was all out, and the integuments rendered flabby, and the great protuberance stood out on one side, he was asked his opinion, and he honestly replied that he was sorry to say that the tumor was nearly as large again as when he had last performed the operation. This certainly was the truth, and yet the man had the effrontery to say that he had killed the lump the first time of rubbing; that he had reduced it one-third the second rubbing, and one-half the third. However, notwithstanding this, the same individual attended for a length of time afterwards, and among other things, recommended an earth-bath, which he proposed to make by putting some garden-mould into the water of a warm bath—in fact, making the bath dirty. He had heard of an earth bath, which is effected by burying a patient up to the chin in the earth; but in his brutal ignorance would have made the bath by taking a few handfuls of mould, and putting it into the water. At another time he thought of a fomentation, but positively did not know how to make it; applied the stalks of his herbs instead of the strained liquid, and so hurt and scratched the patient that she would not allow its continuance. I was written to upon the subject, and informed the family, that a small quantity of mould would make dirty water, and a large quantity mud. The family saw through him at last, and he was ungraciously dismissed. He was not then conscious of skill in any particular disease, but *cured cases in general*, and has since acquired a high reputation among persons of *condition*, not of what the middle classes would consider real education and common sense, and some think that his coming was actually prophesied and faithfully shadowed forth by Moore, the poet, in the adventures of the Fudge Family:—

“There’s Jack, the Doctor—night and day
Hundreds of patients so besiege him,
You’d swear that all the *rich and gay*
Fell sick on purpose, to oblige him.

And while they think, the precious ninnies,
He’s counting o’er their pulse so steady!
The rogue but counts how many guineas
He’s fobb’d, for that day’s work already.
I’ll ne’er forget th’ old maid’s alarm,
When, feeling thus Miss Sukey Flirt, he
Said as he dropp’d her shrivell’d arm,
‘D—d bad this morning—only thirty!’
His skill, too, in young ladies’ lungs;
The grace with which, most mild of men,
He begs them to put out their tongues,
Then bids them—put them in again!
In short, there’s nothing now like Jack;—
Take all your doctors, great and small,
Of present times and ages back,
Dear Doctor Fudge is worth them all.”

But to go on with the present case. The woman was tapped in the hospital, and after the operation a certain degree of inflammation came on. This is not a very unusual thing after tapping, but under such circumstances it would be exceedingly improper to allow stimulants. She had been accustomed after former operations to be allowed porter, but here it was absolutely necessary to apply leeches to the abdomen, and she was ordered, to have them applied more than once, on account of the internal inflammation that ensued. To have made use of stimulating measures in an acute abdominal inflammation would have been absurd, nay more, they would have been absolutely injurious. She was so offended with me because I would not allow her porter, that she left the house in the midst of this inflammatory state, and what became of her I do not know.

A case was presented illustrating the beneficial operation of mercury and iodine in visceral enlargement and in effusion. A woman was admitted in October, *æt.* 33, saying she had been ill three months. She had *ascites* and *oedema* of the legs, and the liver could be distinctly felt, hard and enlarged, its well-defined margin reaching to the umbilicus. I began with two grains of submuriate of mercury, twice a day, and continued it, after her mouth became sore, in sufficient doses to keep up a gentle soreness: she took also the solution of the hydriodate of potass, three times a-day, at first 10 drops, and at last 70 drops, each dose. The ointment of the hydriodate was well rubbed into the abdomen, night and morning. She soon made a large quantity of water, the hydriodate often acting powerfully as a diuretic in dropsy; soon lost her dropsy almost entirely, and the liver became smaller and much less hard, so that she considered herself well enough to go away at the end of December.

A female died that week of phthisis, who had been admitted under acute laryngitis, which had supervened upon the chronic form of the disease, but was soon arrested by leeches and ptyalism. The consumption of course proceeded.

In the same week two cases only were allotted to me on the admission-day, one of which was a case of *phthisis*, and the other of *pediculi* in the head.

You will think it singular that a patient should be admitted merely with vermin in his head. However, I did not admit him, and presume he was admitted merely because he had an eruption in the face, and because he applied when there were many beds vacant; for if this happens almost every one who applies is taken in. It was not, however, known at the time that he was in this unfortunate state, as it is a rule not to admit patients if they have any vermin about them. He came in with a papular eruption of the face, and the case is interesting on that account. When I went round on the following day I found him in one of my wards, and observed this eruption. He told me there was nothing else the matter with him. The sister of the ward, however, gave me a friendly hint not to go too near him. It struck me that this eruption might depend upon the vermin in the head, and I ordered him a strong decoction of stavesacre for the head, which is an acrid poison, and I desired his head to be washed repeatedly with it, and left his face to itself. On my next visit the eruption was entirely gone, and nearly the whole of the vermin in the head were destroyed: a few only remained at his *pole*, and I discharged him, with such a supply of the decoction as would soon entirely eradicate them.

Now this case is instructive as pointing out that an eruption may arise from an accidental cause, without any fault of the constitution; indeed without any fault of the skin itself, but from an external cause. The present patient being very a clean-looking and respectable man, I was surprised to see his head in this nasty state. I asked him how he had fallen into it. He told me that he had been in Russia, where I believe lice prevail to a very great extent—some travellers say that every Russian teems with lice, from the palace to the hovel—and that it was in some of the Russian sea-port towns that he had acquired the vermin. I wish it were in my power to liberate all *Poles* as easily from their Russian foci.

I may mention while on this subject that I knew a naturalist, a very clever man, and, what is singular, particularly skilled in entomology, who had an eruption in another quarter of the body, which he could not understand. He was not in practice, though a physician; he went to Mr. Abernethy, who at once told him that his eruption arose from vermin. They were not the same description of vermin, but inhabited a warmer climate,—a more southern region, nearer the equator; or, if you like to name it from its inhabitants,—the tropic of *cancer*; and they, like

other races of warm climates, were of a darker hue. The naturalist had wished to observe the habits of those creatures, and for this purpose had procured (as he told me) two or three, and transferred them to the spot which he knew was their proper soil, but had afterwards forgotten them. They, however, increased and multiplied, and replenished the spot, and great irritation of the part came on, so that he was miserable. It is curious enough, that though he was a naturalist and entomologist, he did not discover the cause of his sufferings, or recollect that he had been the instrument of emigration and colonization. A single good powdering with white precipitate, or at the utmost a second, washed off in half an hour, never fails to exterminate the tribe.

There was presented during the week a case of *dyspepsia* in a female, which was attended by *palpitation* of the heart. The girl was sixteen years of age, and had been ill fifteen months. You will find palpitation of the heart very frequently united with *dyspepsia*, but without any organic disease of the heart, or any inflammation of that organ. You will be consulted continually on cases of palpitation of the heart at that age. In this case I found pain at the external part of the cardiac region and low down, and I believe this entirely arose from the stomach, because she had great acidity: it appeared that leeches had been applied and a blister, and she had been frequently bled, but without relief. There was no reason to suppose that the disease was at all inflammatory; but seeing that she had such extreme acidity of the stomach, and recollecting that when I was once ill myself I had a similar symptom from erysipelas, and that I had often in the day violent pains, felt not in the stomach, but actually in or on the ribs or their cartilages themselves, which I could remove in a minute by putting my finger down my throat, and bringing up a drachm, and perhaps two drachms, of exceedingly sour stuff, I was satisfied that the pain which she experienced, though not exactly in the region of the stomach, might arise from it. Every part of the heart was beating with equal force; it was not one auricle, or one ventricle, or both ventricles, that beat too much, but the whole went on together with too great rapidity and force. In such instances you may be sure that there is no organic disease of the heart, for in that case one or more parts suffer differently from the rest. She was also subject to vomiting, which rendered it still more probable that the source of disease was the stomach. The only medicine she took was prussic acid, commencing with two minims, three times a day, which was gradually increased to seven. The remedy not producing any effect at first, the dose was gradually increased to three, four,

and five minims; but it was not till I came to seven that the complaint gave way; and after that object was accomplished I found the medicine begin to disagree with her, and I was therefore obliged to reduce the quantity from seven to five minims, and then the girl went on perfectly well. If you only give antacids in these cases, you merely obviate the morbid effect without going to the cause; but if you exhibit hydrocyanic acid, you lessen the morbid irritability of the stomach, which, I believe, engenders this extreme quantity of acid. It was necessary, of course, to keep her bowels open, and she took colocynth pills for that purpose; but it was not until the dose of acid was increased to a considerable quantity that a cessation of the vomiting, a cessation of the acidity and of the palpitation, took place. I have not been able to control palpitation by prussic acid when it has depended upon an affection of the heart itself; but when it has arisen from the stomach I have controlled it exceedingly well, and caused it to go away exactly as in this case, together with the affection of the stomach itself.

There was a case of *erysipelas* presented, which you may recollect, in William's ward. It was a very slight case indeed, and speedily went away by restriction to low diet and the application of cold water, or a cold evaporating lotion, to the face, which was the part affected: it required nothing more. Sulphate of quinine was prescribed before I saw him, in very small doses; but, from what I observed in the case, I do not think this had any influence. The case was so very slight that it might have got well spontaneously; and such cases are daily cured by the application of cold and a restriction to low diet. Many persons fear the application of cold in *erysipelas*, but in general there are no grounds for their apprehension. I never saw mischief arise from cold applications in *erysipelas*, though I have used them, I might almost say, hundreds of times; but if the patient feel them unpleasant, it is decidedly wrong to persist. You are aware that it is a rule with me to accommodate the means I employ to the feelings of the patient. If warm applications appear the more comfortable, I order him warm applications; but if, on the contrary, cold applications suit his feelings better, I give him cold applications. In general cold is exceedingly grateful, and I believe scarcely ever does harm, if you properly attend to the feelings of the patient, and take care to institute any evacuations that may be demanded.

A case of *erysipelas* occurred in a man admitted for chronic peripneumonia and chronic bronchitis, which I will mention now instead of introducing it in its regular order, when he is presented, as I have just spoken

of the other case. You will recollect a man in William's ward with chronic peripneumonia and chronic bronchitis, in whom an abscess took place about the pectoral muscle on one side. The other day I found him in a state of *erysipelas* of one shoulder and one-half of the back; and it is probable that this would have extended all over the back—a very common occurrence. I have seen the very best effects result from an application of the nitrate of silver around the inflamed part: it has prevented the inflammation from spreading, and it was had recourse to in this man. A stain like a ribbon of nitrate of silver was made all around the inflamed part, and the inflammation did not pass over it. A stick of nitrate of silver was wetted, and rubbed, to the extent of an inch and a half in width, all around the inflamed part, so as to make a broad band, something like the representation of the river Thames in the map of London, and the *erysipelas* was arrested by it—never went beyond it.

I have seen a curious circumstance in two or three cases where this application was not made perfectly—where there was not a perfect continuation, but a little part was left untouched,—the *erysipelas* found its way through the aperture—the breach—the want of continuity in the mark of the nitrate of silver, and spread as it would have done if no nitrate of silver had been applied around it. It is a curious circumstance, but the nitrate of silver certainly has this property, perhaps more than any other stimulant application; though a blister will sometimes have the same effect. The case is worthy of your notice, because the disease would, in all probability, have spread in this patient; and if it had, he would most likely have died. It was a case of *erysipelas* attended with great debility, and it was necessary to give him sulphate of quinine in large and frequent doses, strong beef-tea, and every description of nourishment. Mr. Higginbottom's book deserves your attentive perusal.

I shall not have time to dwell upon the other cases presented, but will mention them.

A case of mercurial rheumatism was presented, which gave way to the exhibition of mercury, for when rheumatism comes on during, or soon after, the exhibition of mercury, the best way to get rid of it, for the most part, is to give mercury again.

There was a case of *spasmodic cough* in a young man who died through being seized with peripneumonia. He came in with a spasmodic cough, which had been treated antiplogistically. I have seen many cases of that description,—where there was no disease at all in the lungs, no pain nor rattle, but simply a violent tearing noisy cough, coming on in sudden fits, without expectoration. Carbonate of iron has a great effect in

such cases, and I have cured many of them with different preparations of iron. This case was yielding rapidly to it, when he was imprudently exposed, for some time, to the draft of the door, which was very improperly set wide open during the frost, after my visit, to ventilate the ward, and the next day I found him actually dying.

There was a case presented of chronic bronchitis among the men, and a case of caries of the pelvic bones in a boy.

I wish to mention a case of *paralysis agitans*, of which I spoke in the first lecture this season, and which, I am sorry to say, went out no better. I exhibited iron freely, but it failed; he was freely and regularly electrified, but in vain, and I had recourse to the cold shower bath with no more success. He said the iron did him good, and made him strong, and liberated him of a pain in the head, which he had before he began to take that medicine, but he shook as much as before; he could not keep his arm or his tongue steady. It is curious that St. Vitus's dance is a disease which will generally yield, in a marked manner, to the exhibition of iron, and that I was led to know that circumstance by succeeding in curing a case of *paralysis agitans*, which had proved intractable to every other means, by iron. Thinking that *paralysis agitans* and chorea were much alike, I gave the remedy in chorea, and cured a large number of cases readily, but I have never since cured a case of *paralysis agitans*. I have had five or six cases of the disease, and given iron, but I have never been able to cure the affection a second time. I believe the reason is, that in a great number of cases the affection depends upon organic disease,—that the nervous system is in a state of organic disease; and it is, consequently, out of the power of any of these remedies to do good. I am aware of but one case of inspection after this disease, and that was by the late Mr. Parkinson. He said that in that case many of the nerves had become as hard as tendons, and the medulla oblongata and pons varolii were in a state of great induration. I dare say, if other cases were examined, a change of structure would likewise be found.

A woman was presented, who had been admitted in October, and her case was of considerable interest. Her disease had existed some years, and was an intense *psoriasis*, affecting many parts, but both fore arms and hands universally. Her head ached, and she was *drowsy*. I bled her repeatedly, and the blood was often buffed. She took diluted sulphuric acid three times a-day,—at first, twenty minims, and gradually more and more, till the dose was a hundred. She was kept to low diet. Though she had been ill many years, she soon recovered, and when she went out

had no longer *psoriasis*, but a slight degree of distinct *lepra*, only, however, a few spots on the back of the fore-arm, which she did not consider sufficient to make it worth her while to stay longer in the hospital. Among the women, two cases of *lepra* were also presented, marked by dark redness of the spots, and an ulcer in the throat in one case, and on the tongue in the other: they were cured easily with mercury. A case of *leucorrhœa*, in which an injection of nitrate of silver had been beneficial; and a case of slight acute phrenitis, which some would have called fever, but which soon yielded to local bleeding, mercury and low diet, were also presented.

The patients admitted on the 6th, were four women and seven men; the former labouring under gastralgia, hæmatemesis, rheumatism, syphilis; the latter under pericarditis, inflammatory headache after a blow, three under rheumatism, and two under syphilis in its secondary form.

COLLEGE OF PHYSICIANS.

The first meeting for the season at the College of Physicians is to be held on *Tuesday* next—not on *Monday*, as stated in our last Number.

NOTICES.

The Communications of Mr. Hunt, Mr. Dix, Mr. Tucker, Mr. Berry, and Mr. Hawkins, have been received.

The Biography transmitted to us from Manchester in our next.

BOOKS RECEIVED FOR REVIEW.

The Effects of the principal Arts, Trades, and Professions, and of Civic States and Habits of Living, on Health and Longevity: with a particular reference to the Trades and Manufactures of Leeds. By C. Turner Thackrah.

Illustrations of Mr. S. Cooper's Surgical Dictionary. Parts V. and VI.

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LECTURES
ON
COMPARATIVE ANATOMY,
AS ILLUSTRATIVE OF
GENERAL AND HUMAN PHYSIOLOGY,

*Delivered in the Medical School of
Birmingham,*

By S. LANGSTON PARKER.

LECTURE IX.

On the Organ of Hearing in different Animals.

GENTLEMEN,

THE organ of hearing is an apparatus more or less complicated, by which an animal perceives surrounding bodies through the medium of their vibrations, transmitted by the element in which he lives. The effect these vibrations produce upon the ear is termed sound*. A correct knowledge of the actions of the different parts of the ear in man and animals presupposes an intimate acquaintance with the properties of sound.

In the more perfect animals, as the higher orders of the mammalia, the acoustic apparatus is the most complicated of the special senses, but, like all these organs, it consists of essential and accessory parts, which can only be understood by taking the part as it were to pieces, and seeing to what it is reduced in the lowest animal possessing it, and the manner and succession in which the accessory parts are added as we ascend the scale.

1. The parts of the human ear are fourfold in their disposition, and consist of the essential or fundamental part—the vestibule, in which the nervous agent is distributed.
2. The acoustic accessory portion, which is

a complication or extension of the fundamental or essential part, and is formed by the semicircular canals and cochlea. 3. The accessory part of unison, or reinforcement, or tympanum, and its dependencies, which is of still less importance than the first accessory portion, which is immediately connected with the perception of sound, whilst this only relates to its modification. 4. The accessory collecting part, external ear, or concha, is the least important part of the apparatus, serving to collect and converge the vibrations towards the membrane of the tympanum. By understanding the true physiology of each of these parts, which we shall consider separately, we shall be enabled to judge of their respective importance in audition, and of the degree of deafness likely to result from the organic morbid changes occurring in their several structures. And first I would premise that no true special organ of hearing is perceptible in any animal inferior to the mollusca cephalopoda, or sepia of Cuvier, and some crustaceous animals: although Camparetti has described the part in insects, it does not appear that his dissections have been credited or verified by any anatomist subsequently.

The most simple and rudimentary organ of hearing, then, is met with in the crustacea, sepia, or cuttle-fish, in the elements of the essential part, or the vestibule. This organ varies a little in these two orders of animals, but one description will suffice for both, as the modifications are not important. The vestibule, which composes the whole apparatus in these animals, is a small, oval, membranous sac, enclosed in an osseous envelope: the internal orifice, which may be properly termed the internal meatus auditorius, to which it is in function strictly analogous, admits the filaments of the auditory nerve. The external orifice, or meatus auditorius externus, or rather the “fenestra ovalis,” is closed by a membrane analo-

* De Blainville, Principes d'Anatomie Comparée, t. i. p. 447.

* Cuvier, Leçons d'Anatomie Comparée, t. 2, p. 453.

gous in its actions to the membrana tympani; and as it is through this membrane alone in these orders that the modifications of sound are effected, it is highly probable that its structure is muscular, as we shall afterwards see. In the class pisces the simple vestibular sac becomes complicated by the addition of a rudimentary cochlea and true semicircular canals, which may now take the name of labyrinth, this term being used to designate the totality of the complicated organs forming the vestibule, the semicircular canals, and cochlea. The true vestibule of fish is an elongated oval sac, varying in its disposition slightly in the different orders: from its internal and inferior part proceeds another sac of an oval form, which is larger than the sac of the vestibule itself. This is the rudiment of the spiral cochlea. On the outer side and above are the three semicircular canals, presenting the same disposition as in the mammalia, except that they are proportionally larger; two are vertical and superior, and one horizontal and inferior. The vestibule itself contains two or three small bones of peculiar form and structure, being white as ivory, brittle, and without periosteum. These bones, suspended in a transparent jelly, are believed by Camper, Casserius, and other anatomists, to be analogous to the malleus, incus, and stapes, and it was supposed that their vibration could be excited by the slightest external undulations, which were consequently transmitted by them to the sentient extremity of the acoustic nerve. This is the most probable opinion with regard to their use, since they gradually disappear in the scale as the true ossicula auditus make their appearance, and are increased in number and complexity.

The ear of the osseous fishes does not present any external opening or rudiment of a tympanum, or external meatus. In the cartilaginous fishes a tubulated prolongation proceeds outwards and backwards from the vestibule, and is covered externally by the skin. It is remarked in the skate, shark, and lampreys. Thus we have the organ in the higher order of mollusca, as the sepia, and the lowest class of vertebrate animals (the pisces), limited to its essential parts, viz. the vestibule and its complications, or accessory portions of the acoustic apparatus properly so termed, which tend to render the sensation more perfect; such are the semicircular canals and cochlea, or its rudiments. The vestibule of the pisces is membranous, whilst the external envelope of the semicircular canals and the sac representing the cochlea, is of osseous consistence. These parts are lined by a thin vascular membrane, which encloses the semifluid pulp in which the acoustic nerve is distributed. The vascular

membrane is the essential part of the organ, since it exists alike in all animals; whilst the fibrous, membranous, cartilaginous, or osseous envelope, which serves for its support, varies in density in most animals according to circumstances, from the thin membrane of the sepia to the petrous structure of a part of the temporal bone in the mammalia. The vascular membrane secretes the pulp it contains in which the acoustic nerve is distributed.

The organ of hearing in the reptilia offers a degree of organization still more elevated than that observable in the class pisces. The essential part of the vestibule augments in extent, and allows a greater space for the distribution of the auditory nerve. The semicircular canals vary little in their disposition from what we have noticed in the pisces. The sinus or dilatation of the vestibule, which we have compared to the rudiment of the cochlea, assumes a degree of increasing complexity, being divided into a double cavity by a cartilaginous septum, particularly evident in the crocodile and lizard. The reptilia, generally, are provided with a rudimentary tympanum, which is limited to a small fibrous sheath enveloping their single ossiculum. The tympanum has two openings, one into the vestibule, analogous to the "fenestra ovalis," and a larger one, which communicates with the throat by means of the Eustachian tube. No external meatus is to be met with, and the parts which are analogous in function to the membrana tympani, are the common integuments, or scales covering the organ, which are not in any degree modified or altered in their situation. The sac of the vestibule does not contain stones, as in the pisces, but a thick cetaceous matter, of semifluid consistence. Such are the principal features of the ear of the reptilia: from the vast variety of organization and difference of habit in the orders of this class, the organ of audition presents a number of shades and gradations in the parts we have mentioned, a separate notice of which would lead us into too much detail. In addition to the essential part of the auditory apparatus or the vestibular sac of the molloscu, and the accessory auditory apparatus of the pisces—viz. the semicircular canals and the sinus of the vestibule, or simple sac, which is the first rudiment of the cochlea,—we find in the reptilia the accessory part of unison or reinforcement in the rudimentary tympanum, the single bone in its interior—which, from the dissimilarity of its various parts, has led Blainville to describe it as threefold, its three parts representing the malleus, incus, and stapes,—the Eustachian tube; and even the elements of an external meatus in the crocodile.

In the class aves, the auditory apparatus is still more complicated and developed than

that of the reptilia, and more simple than that of the mammalia, though possessing nearly the same parts.

The sac of the vestibule is, in proportion, larger than that of the mammalia, and presents at its superior part the three semicircular canals, two of which are vertical, and the third horizontal, the central being the largest. The canals open by five orifices into the vestibule, by a sort of dilatation at each orifice much larger than the remaining portions of the tube. The cochlea does not yet offer the true spiral disposition, from which it derives its name. The sac or sinus, which is its rudiment, is conical, and slightly curved; obtuse at its point, and directed from before backwards, the concavity looking backwards. It offers the first appearance of the scala of the vestibule and tympanum in two thin cartilaginous laminae, united by a thin membrane, twisted or turned upon themselves, and adhering feebly to the parietes of the organ. The superior portion of the spiral cartilage terminates at the point of the cochlea in a blind sac. The fenestra rotunda, or termination of the scala tympani, is closed by a membrane. The communication with the vestibule is made by a large foramen, occasionally lessened by a thin fold of membrane. The various parts of the labyrinth are filled, as in the mammalia, by a liquid partaking more or less of the aqueous character.

The tympanum is formed, on its posterior and inferior parietes, by the projections of the occipital bone, and its anterior portion is completed by a bone peculiar to the aves, termed "*os quadratum*." This cavity is not formed, as in the mammalia, by a proper osseous investment of its own. The Eustachian tube, which is entirely osseous, opens in its anterior and inferior part, and the whole of the cavities of each tympanum communicate by means of the cellular structure of the diploe with each other, and with the large cells between the bones of the cranium. This disposition is peculiarly remarkable in the nocturnal birds of prey, as certain species of owls. The bony pillar stretching across the tympanum, from the fenestra ovalis to the membrana tympani, which pushes it outwards, and thus renders the membrane convex, is termed "*columella*." Many anatomists, as Blumenbach*, consider the bone of the ear in birds to be single; others, as De Blainville†, describe the chain in this class as perfect, presenting strict analogies with the malleus, incus, and stapes of the mammalia. That portion of the chain resting upon the membrana tympani is cartilaginous, and is provided with a single muscle, probably a *laxator tympani*.

No true external ear or concha is here met with, the membranous muscular structure of the part, in certain species of owls, resembling, however, a rudiment of this part. The regular and symmetrical arrangement of feathers round the external meatus, appears designed to answer the same end as the concha*. Such are the general peculiarities of the auditory apparatus in the birds: the disposition of the organ in the whole class is nearly similar; the trifling variations it presents relate chiefly to the parts of the atmosphere they generally inhabit, and to the period at which they seek their food, whether in the night or in the day. We see the auditory apparatus in this class more developed than in the preceding, in the increased complexity of its accessory acoustic portion, exemplified in the greater extent of the cochlea; also in its accessory portion of unison or reinforcement, in the greater perfection of the vibratory chain of bones, or columella; and the addition of a true membrana tympani not covered by the integuments. The last accessory portion, tending to perfect the auditory apparatus, likewise first makes its appearance in a rudimentary form in certain orders of this class. Such is the accessory collecting part, concha, or external ear, which collects and refracts, as it were, the vibrations upon the membrana tympani.

In the mammalia the organ of hearing arrives at its maximum of development, and in the different orders of this class possess this part in all the perception of which it is susceptible. The essential part, or vestibule, varies in its figure and size, and is situated, as in all the other classes, nearly in the centre between its two accessory acoustic portions, or the semicircular canals and cochlea. In the centre of the vestibule is found a sac, containing a semi-gelatinous, transparent fluid, in which are two whitish, chalky concretions, which represent the rudiments of the singular bones met with in the vestibule of fishes. Many filaments of the *portio mollis* terminate in this sac of the vestibule. The semicircular canals are three in number, one horizontal and two vertical, opening into the superior and posterior part of the vestibule by its orifices. In this class only is the cochlea a true spiral, divided by a double septum into two distinct cavities, "*oscula vestibuli*," opening into the vestibule, and "*oscula tympani*," opening by the fenestra rotunda into the cavity of the tympanum. The base of the opening of the cochlea into the vestibule does not more than equal that of the horizontal semicircular canal in man, and the generality of mammalia. In the horse-shoe bat the extent of the cavity of the cochlea is ten times greater than that of the semicircular canals. The turns of the

* Manual of Comparative Anatomy, by Lawrence. London, 1827, p. 283.

† Principes, &c. p. 325.

* Comparetti, *Observationes Anatomicae de Aure*, 1789.

cochlea generally amount to two and a half; in the Guinea pig and porcupine they are augmented to three and a half; and in the cetacea, though the part is large, the turns of the cochlea are reduced to one and a half. The ornithorynchi, which are truly mammiferous animals, appear to be the connecting link, with regard to the structure of their auditory apparatus, between the mammalia and aves, thus rendering the gradation in the series complete. In the "ornithorynchus nystrix," the cochlea is merely a curved horn, and not a true spiral, thus representing the disposition of the part in birds*. We have the cochlea of the mammalia, then, in its most rudimentary disposition in the ornithorynchus, the second grade in the cetacea, where it makes one turn and a half; the third in man, where the turns are two and a half; and the most perfect structure in the Guinea pig and porcupine, where they amount to three and a half.

The labyrinth, taken in its totality, is, generally speaking, less in the mammalia than birds; in the latter it bears a larger proportion to the other parts of the ear than the former. In the mammalia, the various parts of the labyrinth are encrusted with the peculiar dense osseous structure of the petrous portion of the temporal bone. It is impossible to separate the petrous incrustation of the temporal bone from the osseous envelopes of the semicircular canals and cochlea in the adult mammalia generally. In some species, and those in whom certain parts of the labyrinth are most developed, and who may consequently be supposed to have the best, the separate parts of the internal ear are not enveloped by the petrous structure; such are the mole and bats. The tympanum communicates with a posterior set of cells in certain carnivora and rodentia; the cells being single in the dog, cat, hare, squirrel, civet, &c.; and numerous in the elephant, hog, and some ruminantia. The tympanum opens into cells in the interior of the zygomatic process in the tardigrada. The rudiments of the accessory cells of the tympanum are found in the irregularities of the cavity of the tympanum itself, in the rodentia, as the Guinea pig, marmot, and porcupine. All the mammalia possess four ossicula auditus, or three, according to Blumenbach, the orbicular bone being merely an epiphysis of the incus†. The ornithorynchus, or duck-billed animal, is the only exception, the bones here being only two. The chief varieties in these bones are met with in the stapes, which consists of a single osseous

plate in the cetaceous animals, whilst the branches of the stirrup are more and more apparent till they arrive at their maximum of separation in the mole*.

The ossicula of the tympanum are moved by three muscles, two of which, by acting upon the malleus, vary the tension of the membrana tympani; whilst the third, the "stapedius," or muscle of the stapes, regulates the degree of pressure made by the base of the stapes upon the fenestra ovalis. In no other class are the bones of the tympanum capable of that perfection of motion which they enjoy in the mammalia. Magendie has noticed that man is the only animal that possessed two muscles for the malleus; the quadrumana have only one muscle for this bone. The muscles of the malleus and stapes in all the other mammalia are replaced by two elastic tendinous bodies, one pertaining to the malleus and the other to the stapes. They do not receive any nerves from the portio dura in its passage through the tympanum, which are so evident in man. The elastic property of the tendon of the malleus keeps the membrana tympani constantly tight, and ready to be acted upon by external vibrations, the degree of tension being regulated, as we shall afterwards see, by the radiated muscle. The tendon of the stapes, by its continued tension and elasticity, replaces and preserves the integrity of the ossicula auditus when they have been deranged by any vibratory motion†. In the aves alone a single muscle is apparent. The membrana tympani has frequently been supposed, from its action, to be muscular, and to have a power of accommodating itself to the various degrees of vibration, without the assistance of the muscles of the malleus. We shall merely allude to its structure in the elephant, the size of the part in this animal rendering it peculiarly fitted for such an investigation; the long diameter of the membrane being here an inch and one-twentieth, whilst in man it is eight-twentieths of an inch only. The membrana tympani of the elephant, according to Sir E. Home‡, is provided with a distinct muscular structure, visible to the naked eye. The muscle is radiated, the fibres commencing at the bony ring of the external meatus, and converging toward the handle of the malleus. The office of adapting the membrane to different degrees of vibration resides in the radiated muscle, by which it is accommodated to the most delicate variations of sound; whilst the property of the muscles of the malleus places the membrane in a degree of tension necessary for the subsequent action of the radiated muscle. It is inferred

* Home, in *Philosophical Transactions*, 1802, p. 355; C. G. Carus, an *Introduction to Comparative Anatomy*, by R. T. Gore. London 1827, p. 308.

† Vide Blumenbach, *Beschreibung der Knochen*. The passage to which the author refers is given by Mr. Lawrence in the notes to his translation of the *Comparative Anatomy*, p. 281.

* See Sir A. Carlisle's paper on the "Physiology of the Stapes," in the *Philosophical Transactions*, 1805.

† *Journal de Physiologie*, &c. t. i.

‡ See *Philosophical Transactions*, 1800, p. 2d.

from analogy that, in all animals possessing a *membrana tympani*, this part is muscular, though the delicacy of its structure escapes investigation.

The external ear, or accessory collecting portion of the auditory apparatus, is peculiar to the mammalia, and exists more or less completely in all. The part, at first flat and immoveable on the side of the head, is gradually detached and elongated, and at length puts on the appearance of a moveable acoustic horn or trumpet, capable of direction to every point. The form of the human external ear, which answers to the rudimentary state of this part, is peculiar, from the shortness of the external meatus, the expansion of the concha, the bifurcation of the anti-helix, the superior part of which, instead of being prolonged outwards, as that of animals, turns inward upon itself, forming part of the helix; the rudimentary action of its proper, and the small number of its accessory muscles, which are only three in number. In ascending the series of animals from man, who in this point is most rudimentary, to the ruminantia and herbivora, who are at the highest point of organization, we see the whole ear raised more and more from the side of the cranium, the true concha augmented, the end of the helix extended outwards to a point, and proper and accessory, or external and internal muscles added to the number of eighteen, by which the concavity of the ear can be increased and directed towards any point to collect the sonorous vibrations. The rodentia, as the hare and rabbit, and certain solipeda and ruminantia, as the horse and ass, the cow, sheep, &c. present us with the perfection of organization of the external ear and its appendages: such are the chief peculiarities of the auditory apparatus in the mammalia. In this class we find all four parts of the ear at their highest points of complexity and organization, though one part is carried to this extent in one animal, as the cochlea in bats, and another in a second, as the external ear in the herbivora. We have seen, in ascending the scale, the rudimentary ear first make its appearance in the sepia and crustacea, in the simple essential sac of the vestibule. In the pisces, the first accessory part was added in the semicircular canals, and a sinus, forming the lowest rudiment of a cochlea. In the reptilia, the elements of the tympanum became apparent with that of the eustachian tube, which part, in birds, assumed a more perfect type, with the addition of a more complicated chain of bones, a *membrana tympani*, and accessory cells, existing between the tables of the skull. In the mammalia we found the four parts of the ear distinct and perfect in the essential part or vestibule; the semicircular canals and true spiral cochlea, the tympanum and its appendages, and the true external ear; the sepa-

rate action of which parts renders the function of hearing exalted, delicate, and perfect. We now come to speak of the nervous agents of the sense. The acoustic nerve is always in relation with the parietes of the fourth ventricle—the mammalia, aves, reptilia, and pisces. In the latter class it is generally a division of the eighth pair, and the proportional volume of the part greatly exceeds that of the auditory nerve in any of the superior classes. The mechanical agents of hearing being rudimentary in this class, it is necessary that the nervous apparatus should be, consequently, more developed. The *portio dura* of the seventh pair, which is the only division of the seventh nerve in the pisces, passes into the ear with the auditory branch of the eighth, and unites intimately with it: this union, which is so intimate in the pisces, is merely *juxta* position in the three higher orders, and it is probable that this disposition likewise gives some additional nervous properties to the action of the auditory sense in the pisces. It is evident, from the size of the nerve in all aquatic animals, that, from the nature of the medium they inhabit, a greater nervous influence must be required for the functions of the auditory sense, as the "*portio mollis*" of the seventh pair of the aquatic turtles bears a marked development over that of the terrestrial ones. The same peculiarity is remarkable in the seals and the cetacea among the mammalia, and also in frogs and the proteus. The *portio mollis*, and *portio dura* of the seventh pair, exist together in the reptilia, aves, and mammalia; and the proportional volume of these two roots, or branches, indicate clearly the degree of action possessed by the internal and external parts of the ear. In the reptilia, the *portio mollis* is much smaller than in the pisces, and the *portio dura* likewise is a minute branch; the acoustic nerve predominates, however, over the facial. The same relation is met with in birds, in whom the size of the acoustic nerve is uniform, but small. In the mammalia the relations are very variable: in the cetacea, the castor, and other animals, the acoustic nerve is much more developed than the facial. In the lion, the horse, the camel, the peccary, the kangaroo, the increase of volume is met with in the facial nerve; in the quadrumana, the mole, &c. the nerves are nearly equal*. Where there is no external ear, the greater development of the acoustic nerve is always apparent, to give an increased susceptibility to the labyrinth, which is deprived of the accessory collecting portion of the apparatus by which the vibrations might be collected in greater quantity, and so transmitted through the tympanum. When, on the contrary, the *portio dura* is the

* Vide Serres, *Anatomie Comparée du Cerveau*, t. i.

predominating part, the external ear will be found, by its extent and mobility, to supply the proportionate decrease of the acoustic nerve by the action which it possesses of directing itself to all points, to collect the sonorous vibrations. Thus the action of the two nerves, as they concern the auditory sense, may be clearly estimated, the portio mollis being devoted to the sensitive recipient action of sounds, while the portio dura is employed in the mobility of the external ear.

In the pisces, both nerves are nearly equal in size, and both are very large; but here they unite to confer some additional property upon the internal parts of the ear. The properties of the fifth pair, when the exclusive nerve of a sense, we noticed when speaking of its physiology generally in our fourth lecture. The actions of the portio mollis are under the influence of the fifth pair, since the integrity of one involves the integrity of the other; if the fifth pair be divided on one side, deafness on the same side is produced. Like all the other nerves of the senses, it is proportionally greater when it has to receive impressions which are feeble, or when the medium which the animal inhabits is less favourable to the production of sound*. Were the laws of the propagation of sound as well understood as those of the transmission of light, the regular manner in which the ear is complicated from the molusca to the mammalia, new accessory portions being added in each class, to the simple vestibule which is first met with, we might be enabled accurately to judge of the exact function of each part, their peculiarity of structure evidently adapting each of them to some special action. It is in the consideration of this sense that the utility of comparative anatomy, as elucidating the actions of organs, is particularly felt. "We may naturally conclude," says Cuvier †, "that the parts uniformly met with in all animals endowed with the sense of hearing, will be those which are absolutely necessary to its functions;" whilst those which are found only in few animals, as the birds and mammalia, in whom the sense is more perfect, relate rather to the appreciation of the modification of sound than to its perception.

The essential portion of the ear is undoubtedly the vestibule, with its contained sac and fluid, described by Scarpa‡, in which the filaments of the acoustic nerve are distributed. The vestibule, as we have seen, exists, with little or no variation, in all animals, from the cuttle fish to man; in all it consists of a sac, filled by a gelatinous pulp, receiving the acoustic nerve. The actions of

the vestibule, in all probability, are limited to the perception of sound, this property necessarily being the ground-work of the sense, as the existence of sound must be ascertained before we can proceed to judge of its modifications. The vibrations are communicated by this gelatinous fluid of the vestibule to the sentient fibrillæ of the nerve distributed in it, and without this fluid no sensation would be produced. This is evident from the dissections of Pinel at Salpêtrière, in 1798, who found the vestibule and its dependencies empty in several aged women who had been deaf for some years prior to their decease*. Experiment on the effects of organic disease will be found to assist induction in attempting to elucidate the action of the various parts of the organ of hearing; and here we can fully appreciate the opinion of Richerand†, "that this kind of natural analysis of the ear is well calculated to give accurate notions of the nature and importance of the functions fulfilled by its various parts, but that in the investigation of the relative importance of the parts of the auditory apparatus, morbid anatomy furnishes data of an equal value with those drawn from comparative anatomy." The vestibule, with its sac and nerve, are then the essential organs of hearing, but their actions are limited to the perception of sound only.

The external ear, or concha, is adapted to the collection of sonorous vibrations, and their reflection upon the membrana tympani of the muscles of the ear, both external and internal, by which its open extremity can be directed towards any point, render this organ, in most of the mammalia, an important accessory organ to the auditory apparatus. The functions of this organ are, however, very questionable. In some of the mammalia, the mole, for instance, and in the class aves, generally, in whom the sense is very delicate and perfect, no concha is found, and the sense is not the less exalted. We have seen all animals inferior to the mammalia to be destitute of the concha, and yet the faculty of hearing possesses in them a great power and delicacy scarcely inferior to that of the mammalia themselves. Itard has never seen the obliteration of the concha

* Itard, *Traité de Maladies de l'oreille et de l'audition*, Paris 1828, has recorded the case of a porter who was totally deaf from the absence of the vestibular fluid. It appears from the uniform existence of this fluid, that it is essential to the integrity of the sentient fibrillæ of the nerve; and in examining the ultimate distribution of all the sensitive nerves, except the optic, the mechanism of whose action is different, of the economy, we shall find their extremities defended and moistened by a particular fluid, which appears to be essential to their actions; such are the mucous pigments of the skin, and the secretions of the olfactory and gustatory chambers.

† *Physiology*, &c. by G. J. M. De Lys, M.D. London 1824.

* In most of the mammalia, the acoustic nerve is proportionally larger than in man.

† *Leçons d'Anatomie Comparée*, t. ii. p. 450.

‡ *Disquisitiones Anatomice de Auditui et Otifunctu*. Mediolani 1791, folio.

weaken the sense of audition, either in man or animals. Some physiologists are of opinion that this part of the apparatus is rather ornamental to the animal, as expressive of character by its motions, than of any utility to the perfection of audition. We conclude, however, that it does, in some measure, tend to perfect the actions of this sense, probably in the perception of very faint and distant sounds, as the part possesses most motion in animals remarkable for these properties, and as destruction or injury to other parts of the organ call into action the concha in man, which is not in ordinary cases capable of visible motion. Thus in the case mentioned by Sir A. Cooper*, where the membrane of the tympanum was destroyed, both auricles, or concha, possessed a visible voluntary motion, upwards and forwards, when more than ordinary attention was required in listening. Man is far inferior to animals in the disposition of the external ear, its flatness and immobility in the former being strongly contrasted with the trumpet-like form, and celerity and variety of motion in the latter. In all animals possessing an external meatus, this part is remarkably tortuous, or oblique, being thus designed, in all probability, to guarantee the membrana tympani from the direct or too forcible action of the air, or external agents generally.

The membrana tympani, which we saw was muscular in the ear of the elephant, adapts itself to the degree of sound which is communicated to the bones in the cavity of the tympanum. The true membrani tympani, by which we understand a thin musculo-membranous expansion, extended between the tympanum and external air, is found only in the mammalia and aves; in the other classes it is covered by the general investment of the body. From this disposition, we are assured it is not essential to audition: this opinion derives support from the result of cases where the membrane has been destroyed from disease, or where it has been punctured by an operation, the sense being in these instances impaired, but not destroyed. This membrane is the first part of the organ, proceeding from without inwards, which is designed to place the modifications of sound in a state to be perceived by the nervous pulp of the vestibule. This is evident from the fact, that persons in whom this membrane has been destroyed or perforated, particularly when this destruction or perforation implicates the attachment of the handle of the malleus, are unable to distinguish low or grave sounds†. These sounds are received by the membrani tympani in its most relaxed state, and thence communicated to the chain of bones. When this membrane is destroyed, there is no part of the organ left by which grave sounds can be appre-

ciated, as the membrane of the fenestra ovalis, which, in these cases, Sir E. Home* supposes receives the vibrations, cannot, from its structure, be sufficiently relaxed to place it in relation with sounds below a certain pitch.

The membrana tympani is then the first part of the organ of hearing that places certain modifications of sound in a state to be perceived. The ossicula auditus, or vibratory chain of bones, extended across the tympanum to the number of four, or rather three, in the mammalia, and one only in the inferior classes, are manifestly adapted to the transmission of the vibrations from the membrana of the tympanum to that of the fenestra ovalis. The muscles moving these bones, it will be recollected, amounting to three in man, and two in the mammalia, generally are reduced to one in the aves, whilst the columella of the reptilia is unprovided with any muscular or elastic appendage. The perfection and variety of motion in the bones of the tympanum will always be found to bear a strict relation to the structure of the membrana tympani. It amounts to a certainty, though the fact has not been actually demonstrated, that the membrane of the tympanum offers the muscular structure in the higher animals only, as in certain orders of the mammalia; whilst its bracing and relaxing power, to place it in relation with the infinite varieties of sound, are gradually more and more enfeebled as we descend from the mammalia to the aves, from the muscular to the membranous structure, to the reptilia and pisces, where the membrane is not acted upon directly by the surrounding element. If we examine the ossicula of the tympanum, we shall find them and their muscles most numerous where the motions of the membrani tympani are most varied, as in the mammalia. The ossicula are evidently adapted, by their varied motion in this class to transmit the modifications of sound received by the membrane of the tympanum. However well adapted this membrane might be to the reception of the varieties of sound, its actions would be useless unless a transmitting agent were placed between it and the vestibule, which was enabled, by its peculiarity of structure, to adapt itself to the impressions produced upon the membrane of the tympanum. This explains why we find the motions of the membrane, and those of the ossicula, always corresponding; and why the mechanical structure of each, fitting them for these actions, are always developed together; and the perfection or imperfection of one always corresponding with the perfection or imperfection of the other. Thus it will be found that the muscular membrane of the tympanum is always accompanied by a chain of four bones,

* Philosophical Transactions, 1800.

† Vide Itard, l. c. t. ii. p. 159, and t. i. p. 139.

* Philosophical Transactions, 1800, in a note to Sir A. Cooper's paper.

moved by three muscles, as in the mammalia generally; that the membranous structure is accompanied by a flexible bone, moved by elastic ligaments, as the columella of the aves; whilst the parts where the membrane is not in contact with the external air, or water, is provided with an inflexible bony appendix, extending between the membranes of the tympanum and the fenestra ovalis.

The ossicula of the tympanum, then, transmit the sounds received by its membrane to the fenestra ovalis, their extent of motion always corresponding with the compass or variety of tone which the membrana tympani is enabled to appreciate. Destruction of the malleus and incus incapacitates the animal from hearing bass notes.

Man enjoys more than any animal the faculty of seizing the nicest varieties of sound, which faculty corresponds with the perfection of his organization, exemplified, as we have seen, in the structure of the ossicula, and the number of their muscles. Neither comparative nor morbid anatomy furnish us with any data from which we can deduce any positive inferences as to the actions of the semicircular canals and cochlea; the theories which numerous writers have promulgated are merely physiological dreams, utterly destitute of foundation, and exemplify the folly of that reasoning upon function which is incompatible with structure. Such is the theory which assigns to the cochlea the office of a musical organ, when we find the part most perfect and developed in the bat, the guinea-pig, and the porcupine. It is most probable, from the uniform existence of the semicircular canals of cochlea, variously disposed, in all animals superior to the sepia, that their chief use is to extend the surface over which the sentient portion of the acoustic nerve is distributed, and thereby to render the actions of the organ more powerful and effective.

From this survey of the structure of probable uses of the different parts of the ear, we see that the successive and gradual perfection of the sense depend on the following particulars:—

- 1st.—Upon the size and pulpy texture of the sensitive nerve.
- 2d.—Upon the quantity and elasticity of the humours in which it is distributed.
- 3d.—Upon the existence of spiral and contorted tubes appended to the simple vestibular sac.
- 4th.—Upon the facility of communication of the essential parts with the external air, or the medium through which the vibrations are propagated, exemplified in all those animals where the membrane of the tympanum is not covered by the integuments, or their appendices.
- 5th.—Upon the power of keeping constantly around the organ a greater or

less quantity of atmospheric air, by which the vibrations may be the more readily communicated. Such is the office of the tympanum, the bulla ossea, and the mastoid cells.

6th.—Upon the power of placing a part of the organ in unison with the sonorous vibrations, this power being exemplified in the muscular membrana tympani.

7th.—Upon the internal parts being protected from the too sudden or violent effects of sound by the oblique or tortuous meatus auditorius externus; and,

8thly.—Upon the action of the auricle or concha in gathering and directing towards the essential parts of the organ a more considerable quantity of the sonorous vibrations emanating from any body.

Abstract of a Clinical Lecture lately delivered

By DR. GRAVES,

AT THE

MEATH HOSPITAL, DUBLIN.

Of the Effects of Colchicum on the Urine in Acute Arthritis, and of the appearance of Albumen in the Urine in Dropsy.

GENTLEMEN,—We have lately had many opportunities of witnessing the good effects of colchicum in acute inflammation of the joints. At our last meeting I endeavoured to point out the symptoms which indicate its exhibition in this species of rheumatic fever, and we arrived at the conclusion that no symptom does so more unequivocally than a copious deposition of the lithates in the urine. In such cases, if the urine is high-coloured and acid when voided, and if, upon cooling, it deposits a sediment consisting of the lithates, the colchicum rarely fails to give relief. Some have asserted that its beneficial influence is owing to the power it possesses of eliminating the lithic acid and its salts from the system through the kidneys, and that the inflammation of the joints, a process so intimately connected with the exudation of fluid containing large quantities of the lithate of soda, is thereby checked; this salt being thus determined from the articular surfaces, and separated from the blood along with the urinary secretion. This explanation, however, cannot be well

founded; for, in all our cases with the urine thus loaded, the colchicum caused not a greater impregnation of the urine with the lithic acid and its salts, but the contrary; and in proportion to the quantity of colchicum taken, and in proportion to the diminution of articular inflammation and the relief experienced, was the diminution of the quantity of these matters in the urine. Now, as the subsidence of the inflammation and pain in the joints kept pace with this improvement in the urine, it is obvious that the lithic exudation within the joints was decreasing at the very same time that the lithates were diminishing in the urine; and consequently the beneficial action of the colchicum is not owing to its producing a more rapid excretion of the lithates through the kidneys, but to the very remarkable property this plant possesses of altogether putting a stop to the morbid formation of the lithates. The same observation applies to nitre, antimony, calomel, venesection, and, in short, to all other remedies which are useful in this disease. Whenever they prove serviceable, they diminish the signs of the lithic acid diathesis in the urine. It is worthy of notice, that in intermittent, remittent, hectic, and continued fevers, we most commonly observe the urine high-coloured and without sediment, until a diminution or cessation of the fever takes place, when it frequently becomes loaded with the lithates mingled with the purpures; whereas in the fever accompanying acute arthritis, a remission or cessation of the fever and inflammation is almost invariably attended with the diminution or total disappearance of this state of urine; and it is exactly at this period that we may commence the exhibition of sulphate of quinine, to prevent a relapse, recollecting, however, that we must at once lay it aside, and recommence the colchicum, should the urine again exhibit signs of a recurring lithic acid diathesis, for this change is invariably either accompanied or followed by a reappearance of the arthritic inflammation and pains. On a former occasion I remarked that the action of colchicum in thus, as it were, stopping the disposition to the formation of the lithates, is analogous to the effects of other remedies in certain cases of dropsy, attended with albuminous urine. Knowing, as we do, that the serous effusions so copiously

secreted by the vessels, in dropsical diseases, consist chiefly of water holding albumen in solution, we would naturally consider the appearance of albumen in the urine as a favourable symptom, proving the excretion of the morbid product by means of the kidneys, and thus affording an outlet for the diseased secretion. Now the very contrary takes place; for whenever any remedy diminishes the swellings and effusion in dropsy with albuminous urine, this change for the better is invariably attended with a diminution in the quantity of albumen in the urine. Such remedies must therefore act by diminishing the albuminous secretions in every part of the system. With reference to the existence of albumen in the urine of dropsical patients, I may remark that Blackall and Bright are both equally mistaken; the one in considering this sort of urine as always indicating the same treatment, the other in thinking that this albuminous urine is always connected with an appreciable organic change in the structure of the kidneys. The fact is, that an albuminous state of the urine may occur in dropsies of the most opposite pathological characters; it may be equally remarkable in the most acute and inflammatory, as well as in the most chronic and asthenic forms of this disease; and consequently this symptom, together with the accompanying dropsy, is best combated in the one case by venesection, the antiphlogistic treatment, nitre, and digitalis, &c. and in the other by stimulating diuretics, &c. &c. That the former method of treatment, carried to a greater or less extent, is much more frequently applicable than the latter, I am ready to admit; but still I cannot help thinking that the depleting system has been, of late years, too indiscriminately employed in the more chronic forms of dropsy. The celebrated J. B. Frank was the first to remark that certain forms of chronic dropsy present many points of similarity with diabetes. This remark is much confirmed by the increased light which a knowledge of animal chemistry throws upon both these diseases, and of which Frank, of course, could not avail himself. Thus we now know that an albuminous state of the urine is frequently observed in diabetes as well as dropsy. In Mahony's case we had occasion to observe that the urine was, throughout the whole course

of the dropsy, albuminous, and at the same time contained a minute portion of sugar, the existence of which was most unequivocally proved by Mr. Kane, then clinical clerk to the medical wards of the Meath Hospital, but who has been since appointed Professor of Chemistry to the School of Pharmacy in Dublin. If sugar be hereafter detected in certain dropsical effusions, as I expect it will, the analogy between dropsy and diabetes will be still more confirmed. Frank, too, records the fact of chronic dropsy being occasionally cured by large doses of opium, given merely with the view of mitigating the patient's sufferings; and I myself have seen a case of dropsy which alternated with diabetes in a very remarkable manner; so that when we consider the great benefit derived from opium in most diabetic cases, the analogy is still further strengthened.

Such, gentlemen, were the considerations which led me to believe that, in certain cases of chronic dropsy with albuminous urine, and not depending on organic disease of the viscera, large doses of opium might prove useful, especially if combined, as in diabetes, with a diet consisting chiefly of animal food. The event has proved the correctness of this anticipation, and many of you have expressed considerable surprise and satisfaction at the remarkable success which attended this practice in a man afflicted with chronic dropsy of the most obstinate character. This man had been at first treated on the antiphlogistic plan, until he was relieved of a cough by which he was then annoyed, and this plan was followed up by all the usual diuretic anti-hydrotic medicines, but in vain: so that, after a very long and assiduous course of treatment in our wards, the ascites and anasarca were undiminished, and his strength much impaired. We now gave him one grain of opium four times a-day, and gradually increased the dose to ten grains in the day; and along with this allowed him a large portion of animal food, and a tumbler of gin and water in the afternoon. The opium neither increased his thirst or caused headache, nor did it make his tongue furred, or diminish his appetite; but what is most remarkable, his urine was greatly increased in quantity, and improved in quality, during its exhibition, while the dropsical swellings shewed a decided tendency to

diminish, and finally disappeared altogether. That the opium was the chief instrument in procuring this alleviation, was proved by the immediate recurrence of all the symptoms whenever we occasionally intermitted its use for the sake of experiment. This man's cure was confirmed by sulphate of quinine. Let me again repeat, gentlemen, that I believe the cases to which such a method of cure is adapted, are by no means common, and in my practice I have not met with more than three such; still, however, enough has been said to prove that the subject deserves the serious consideration of the practical physician, and that he who will accurately ascertain the indications which point out what cases of dropsy require this treatment, will have made no unimportant addition to our knowledge. It may be right to remark that in the examination of the milky serum of dropsical blood, Mr. Kane has frequently detected both stearine and elaine, and thus our observations accord with those who attribute this appearance to the presence of oil in the serum. Mr. Kane found, likewise, that the quantity of albumen was diminished in this milky serum, but that no urea could be detected in it on the most accurate examination. That urea, however, may be sometimes detected in dropsical blood, has been proved by the experiments of Christison. As a contribution to our knowledge of the chemical composition of morbid products, I may here remark that Dr. Apjohn and Mr. Kane have both succeeded in discovering an oily or fatty matter in the fluid effused into the cellular membrane in anasarca, so that we see a slight remnant of the subcutaneous adipose matter is still observable in the serous effusion which occupies its place. This observation accords, I believe, with the results of similar investigations concerning the chemical composition of the anasarcaous fluid, made by French chemists. Before I conclude, gentlemen, I think it right to communicate to you the analyses of the urine, in the case of Levy, the man who was admitted labouring under considerable enlargement of the liver, attended by tenderness under the right hypochondrium, but no fever. His urine was of a pale straw-colour, and remained quite transparent when cool, and was slightly acid when voided. It contained the usual quantity of salts, but very little animal matter, viz. about

one-tenth of the natural proportion of urea, and a very small quantity of albumen. Its specific gravity was unusually low, amounting only to 1005.

In Hickey's case there is also considerable enlargement of the liver, and tenderness of that organ, and the analysis of the urine presented results almost exactly similar. It is to be observed, that in neither of these cases was there any jaundice. This diminution of the urea, the occurrence of a small portion of albumen, an unusually low specific gravity, and a pale state of the urine, without the deposition of any notable sediment on standing, may be considered characteristic of chronic hepatitis, so far as our observation of two cases can be trusted. However, we must wait for further experience before we can speak decidedly on the matter, at the same time observing that there was no fever in either of these cases.

A

CASE OF

SCIRRHIUS UTERI,

*With Malignant Ulceration of the Uterus, and
Exstirpation of that Organ.*

By DR. BLUNDELL.

Great George-Street, Westminster,
January 28, 1831.

JOSEPH HASLAM'S wife, æt. 47, of light complexion, stout, and not of unhealthy appearance, the mother of thirteen children, applied for relief in the beginning of April, under the following circumstances. She states, that in February last, during the severe frost and snow, she exposed herself to cold at the time she was menstruating; the discharge disappeared suddenly, and ever since she has felt great uneasiness, and occasionally very severe pains in the region of the uterus, sometimes extending to the loins and down the thighs. She has a very offensive discharge from the vagina. On examining with the finger by the vagina the os uteri felt of a scirrhus hardness. With the assistance of a speculum, an unhealthy-looking ulcer, somewhat larger than a shilling, was discovered on the posterior edge, and rather within the os uteri.

With the finger by the rectum, the uterus felt harder than natural, and apparently somewhat enlarged. Her general health was pretty good; she had menstruated regularly since she left off suckling her last child. She was directed to use a lotion, consisting of one part of the solution of chloride of soda, and sixteen of water; to have the ulcer touched daily with a strong solution of argenti nitras, by means of a camel-hair pencil; to take the extracts of hyoseyamus and cicuta three times a-day, an opiate when the pain was violent, and to have the bowels regulated by means of castor oil. This plan of treatment was continued until the time she underwent the operation, without any material alteration. She was seen by Drs. Calvert and Bent, who considered her case to be hopeless. The latter recommended the muriated tincture of iron to be used in the same manner as the nitrate of silver, which was to be discontinued.

In the beginning of July she took to her bed. Not receiving any material benefit from the treatment above mentioned, and being aware of the malignant nature of the disease from which she was suffering, she inquired if it were not practicable to have the diseased parts removed by operation, and stated her willingness to submit to any measure, however painful, that would afford her a chance of recovery. She was told that no operation short of removing the entire womb could possibly benefit her; that this was an operation attended with extreme danger; that every possible means should be taken to palliate her sufferings; and with this assurance she had better be resigned to her fate. This, however, was far from satisfying her; she continued to urge an operation at every succeeding visit; her solicitations were parried for some time, but at length consented to. With the assistance of Mr. Bennett, I performed the operation at one o'clock on Saturday, October 16th, in the following manner. Before, however, proceeding with the details of the operation, it may be proper to state the alteration that had taken place in the patient since her first application.

Her general health was impaired, but not more than might have been expected from the long confinement and the suffering she had undergone. She was not much emaciated,

but very pale. For the last seven or eight weeks she had had a considerable discharge of blood (which she called being unwell). The ulcerations had extended considerably; the os uteri had quite a ragged appearance. In the upper parts of the vagina there was a little hardness, but no ulceration. Her pulse was small, and quicker than natural; her tongue was pretty clean, and her appetite not bad.

Operation.—The patient was placed on her back, with the legs bent, as in the operation for lithotomy. The hands and feet were not bound, but each leg was supported by an assistant. Weiss's speculum ani was introduced by the vagina, and a portion of the neck of the uterus seized with a pair of Lisfranc's forceps, which were passed between the blades of the speculum, and held by Mr. Bennett. The speculum was now withdrawn and the uterus pulled down into the vagina, so as to be visible when the labia were separated. Another portion of the uterus was taken hold of by a second pair of forceps, similar to the former, and likewise held by Mr. Bennett. He was requested to raise the uterus towards the pubes, so as to separate it as far as possible from the rectum, by which means the operator had a better chance of seeing the parts he was about to divide, and was also in less danger of wounding the rectum. The first incision was made with a common scalpel into that portion of the vagina which lies between the uterus and rectum, dividing the mucous membrane and the fibrous substance of the vagina, but not penetrating the cavity of the peritonæum. The index finger of the left hand, armed with a straight probe-pointed bistoury, was passed into the wound, and the incision continued first as far as the right lateral ligament, and then as far as the left. Thus the posterior half of the vagina was divided.

The uterus was now drawn down towards the anus by Mr. Bennett altering the position of the forceps, so as to expose the parts between it and the bladder. I then proceeded to make a small aperture in that portion of the vagina situated between the uterus and the bladder, into the cavity of the peritonæum. Through this aperture the index finger of the left hand was introduced, and the incision extended each way as far as the lateral ligaments; in a simi-

lar manner to what has been mentioned in dividing the posterior parts.

At this period of the operation the bladder was unfortunately punctured, and from three to four ounces of urine escaped at the opening; this was partly owing to a fold of the bladder being dragged down with the uterus from its natural situation, and partly to the quantity of urine which the bladder contained. It was intended that the catheter should be introduced prior to the commencement of the operation, but as the patient stated she had just evacuated the contents of the bladder, as well as of the bowels, it was deemed unnecessary.

There now only remained to be divided the lateral ligaments and the parts contained in them. The forceps being removed, and the hand carried into the vagina (which was easily effected), two or three fingers were passed through the anterior incision, and the fundus of the uterus hooked down by them. A strong tenaculum was deeply fixed into the uterus, by which it was drawn down so as partially to protrude at the os externum. The left index finger was passed behind the right lateral ligament; it was then divided, with the round ligaments and fallopian tube; and afterwards behind the left, which, with its contents, was divided in like manner.

The uterus was now completely separated, and was removed without any difficulty. Two or three small portions of hardened vagina were left in the pelvis, to be removed at some future period, if necessary.

The operation was borne with very great fortitude; it lasted about twenty minutes, and not more than five or six ounces of blood were lost. The patient appeared somewhat exhausted, but not more than might have been expected after so severe an operation. A little brandy and water were given; afterwards she was put to bed, and took sixty drops of laudanum.

Examination of the Uterus.—The uterus was rather larger than natural, and the os uteri a complete mass of ulceration. On cutting it open, the walls of the uterus were found to be thickened and exceedingly hard. The ulceration had not extended beyond the neck; the mucous membrane lining the body of the uterus had a healthy appearance.

8 P.M.—Complains of pains in the

lower parts of the abdomen; which she attributes to wind; but without any tenderness, or distention. Countenance rather anxious; pulse 120, and feeble. Ordered fomentations to the belly, and thirty leeches if the pain be not relieved in the course of an hour. The female catheter to be introduced, and allowed to remain in the urethra.

9 A.M. Sunday.—Has slept several hours during the night. Pain relieved by leeches and fomentations. Took half an ounce of castor oil at her own request, which was rejected in a few minutes. Still complains of sickness and flying pains in the lower part of the abdomen. Has had no stool; urine passes freely by the catheter; tongue slightly furred in the centre, and dry, but moist on the edges; pulse 120, and feeble; no fever. Apply twenty leeches to the lower parts of the belly; let her take the saline effervescing mixture every three or four hours, and a second dose of castor oil immediately. Her diet to consist of milk porridge and barley water.

9 P.M.—Her general appearance is not so favourable as in the morning; countenance rather anxious; complains of feeling low, and has been troubled very much with sickness. Has slept at intervals during the day. She is free from pain; the belly soft, and pressure is borne without pain. Ordered twenty drops of liquor opii sedativus, with a little mint water, and the dose to be repeated in two hours, if necessary; to have a little weak brandy and water, and to be kept very still and quiet.

Monday, 9 A.M.—Something better; slept well till four o'clock, when the pain returned; she then took a second dose of liquor opii sedativus, after which she became easy, and fell asleep. Pulse same as last night; tongue rather more furred and drier; countenance more natural; is free from pain; has only had one evacuation. Belly a little too full, but not tender. To take half an ounce of castor oil directly, and to repeat the dose in three or four hours, if necessary; continue the effervescing medicine.

9 P.M.—Scarcely so well; complains of pain in the right hip and groin, which has continued for the last two hours; the bowels have been purged rather violently, (four or five times) which has produced a good deal of low-

ness; has been sick for the last hour; pulse 120, and feeble, as yesterday; has taken food several times, and slept at intervals. Repeat the anodyne draught.

4th day, Tuesday, 9 A.M.—Something better this morning; slept pretty well during the night; belly soft, and not at all painful; pulse same as last night; still complains of sickness; has not been purged since last night. Continue the effervescing mixture.

9 P.M.—Not so well; has been disturbed by the family; belly a little fuller than natural; rather painful, but not tender; sickness has not returned since morning. Pulse 115, and rather stronger; has had no stool since last night. Ordered, fomentations to the belly; to take another composing draught at night, and ʒiii. of castor oil the first thing in the morning.

5th day, Wednesday, 9 A.M.—Something better; pain relieved by the fomentations; pulse 120; tongue rather furred in the centre; countenance more natural; belly still too large, particularly about the pubic region; has had no stool. The urine has passed by the vagina since last night; the catheter was withdrawn, and found to be quite stopped up with thick mucus; it was cleaned, and again passed into the bladder, when about an ounce and a half of healthy urine came away. Has had a slight return of sickness this morning. A common clyster to be administered immediately; she had a return of pain in the middle of the day; it was relieved after the bowels had been moved, and twenty leeches applied.

9 P.M.—Much better; quite free from pain; a little urine passes by the catheter, but more by the vagina. Repeat the anodyne draught.

6th day, Thursday, 9 A.M.—Has had a good night, and continues better in every respect.

9 P.M.—Not quite so well; catheter had got plugged up again, and the urine has come away by the vagina, causing severe smarting; in other respects she is quite as well as in the morning. The catheter was removed, cleaned, and replaced; to take another opiate to-night.

7th day, Friday, 9 A.M.—Has passed a good night; complains only of the smarting pain in the vagina; catheter quite stopped up; no urine has passed by it for some hours; the nurse was shewn how to introduce the catheter,

and requested to withdraw it frequently, clean it, and introduce it again.

8th day, Saturday, 9 A.M.—Much better: pain quite gone; has passed a good night; bowels still quite open.

9 P.M.—Continues better.

10th day, Sunday.—Still better.

10th day, Monday.—No material alteration. She takes milk porridge several times during the day. From this time she continued to improve.

On the 30th of October a speculum was passed into the vagina; the parts appeared healthy, but on examining with the finger the cicatrix felt hard and scirrhus. The puncture in the bladder was not perceived, but as the urine continued to pass by the vagina, it was too certain that the wound in the bladder was not healed. She was requested to lie upon her belly as much as possible, so as to allow the edges of the wound to be in contact with each other; by this means it was hoped that the union might take place.

On the 5th of November she had a slight return of pain in her back, striking down her thighs and into the groins; it was relieved by the application of half a dozen leeches and the hip-bath. At the present time (Nov. 16th) she appears better than she was before undergoing the operation. Her tongue is clean, her appetite good, and her countenance animated. She is unconscious of any other discharge from the vagina except the urine. To-day she has been requested to discontinue the catheter altogether, and to wear a piece of sponge in the vagina.

nions. I believe I have noticed every attempt at argument it contains, excepting some too trifling to repeat. I also find that he has prudently declined making any reply to the arguments I have advanced, shewing that his doctrines ill agree with the cases he has produced for their illustration; as well as to those proofs I have given that those doctrines, as far as any of them are true, tend to support the theory he opposes.

This theory I have thought proper to analyse, because I found I could not better illustrate Dr. Corrigan's theory than by so doing.

For the purpose of rendering the theory as intelligible to the reader as possible, I will first shew Dr. Hope's views of the succession of the heart's actions, and in doing so I shall divide the subject into four heads:—

1. Immediately before the ventricular systole, and consequently before the first sound, the systole of the auricle takes place.

2. The ventricular systole is continued till it terminates in the second sound.

3. Before the second sound, however, a ventricular diastole takes place, and before the termination of which another systole of the auricle, with which the blood rushes into the auricles, terminating in the second sound.

4. What takes place between the second and the first sound we are left to guess; but, as according to 3, the ventricular diastole ends in the second sound, and its systole is simultaneous with the first sound, the ventricle remains distended during the interval between the second and first sounds.

But as, perhaps, the reader will hardly credit that a learned doctor in medicine, who professes to have had six years of stethoscopic experience, could have made such mistakes, I will now make such quotations as shall prove, that each of the heads above enumerated are really Dr. Hope's doctrines. In doing this, the reader need not fear that I shall make any false quotations.

Dr. Hope says, (Med. Gaz. vol. vi. p. 785), "that in small animals the auricular systole took place immediately before the ventricular, and not after, as supposed by Laennec, we regarded as certain, both from the evidence of our own experiments and from the concurrent testimony of the old physiologists." Again, in his first conclusion, (Med.

ILLUSTRATIONS

OF

DR. CORRIGAN'S THEORY

OF

THE ACTIONS OF THE HEART.

BY DR. HAYCRAFT.

PART III.

[Concluded from the preceding No.]

Dr. Hope's Theory.

I HAVE now waded through Dr. Hope's paper as far as it relates to my opi-

Gaz. vol. vi. 789), he says, "the auricles contract so immediately before the ventricles that the one motion is propagated into the other almost as if by continuity of action, &c." He also quotes Harvey and Dr. Turner to prove the same point. Thus he firmly believes that the auricular systole immediately precedes the ventricular, which, by-the-by, I wonder at, seeing the evidence for it is so complete. Now a main point of his theory is, that the ventricular systole is simultaneous with the impulse, and therefore with the first sound, see his conclusion 3; (Med. Gaz. p. 789, et passim) consequently he must mean to say that the auricular systole immediately precedes the first sound. This shews the correctness of the first head.

To prove the second, I shall merely quote his fifth conclusion, (p. 789). "The ventricular contraction commences suddenly, but it is prolonged through the interval which intervenes between the first and second sounds." That this is true was proved by the evidence of his coadjutors in the experiments on the ass.

The third head is proved by reference to his words (see Medical Gazette, vol. vi. p. 937):—"The second sound, or that produced by the ventricular diastole, is attributable to a more simple and constant cause; it is accordingly more uniform in its character. When the diastole takes place, the blood shoots in from the auricle, favoured by a number of concurrent circumstances; these are, the width of the auriculo-ventricular apertures; the expansive elasticity of the ventricular parietes on its particles, when their course is abruptly arrested by the completion of the diastole, is to be regarded as the cause of the loud, brief, and clear sound," (i. e. of the second sound*.)

As a proof that the assumption under the fourth head seems to be the opinion of the said gentlemen, we have only to read his conclusion 8, which is, "after the diastole the ventricles remain quies-

cent, and in a state of apparently natural fulness, until again stimulated by the succeeding auricular contraction," (Med. Gaz. p. 789), for, according to the third head, the extreme diastole of the ventricle, or in Dr. Hope's words, "the completion of the diastole, coincides with the second sound; and, as according to his fundamental opinion, the systole is simultaneous with the impulse and first sound, it follows that the ventricles remain quiescent, and in a state of apparent natural fulness," from the period of the second sound till that of the first, when, according to him, its systole takes place!

The following inferences are deducible from this theory.

As the ventricular systole is "prolonged through the first and second sounds," and as its diastole takes place before the second sound (see 3mo. head), it follows that the ventricular systole, and its diastole, take place at the same time!

That as both actions take place at or between the times of the first and second sounds, (heads 1, 2, and 3), the whole of the ventricular actions are crowded into the shortest interval, namely, between the first and second sounds!

It follows, also, from the last inference, that during the longer interval, namely, more than one half of a whole beat, the ventricle is quiescent; notwithstanding that Dr. Hope says, for which he has the authority of Laennec, "the interval of ventricular repose . . . occupies one-fourth, or rather less . . . of a whole beat!"

That as the systole of the auricle takes place immediately before the ventricular systole and first sound (head 1ro.), and as also an auricular systole occurs immediately before the second sound, according to the 3mo. head, there are two auricular systoles in one whole beat!

I could show as many more absurdities arising from this theory, but it is, I think, needless. Theory indeed! I suppose so called from its *not* bearing inspection. "Lucus a non lucendo."

Unfortunately for the Doctor, some truth, though borrowed, is mingled in his theory, though not united with it, which, if I may use a figure almost too good for the occasion, is like the metal mixed with the clay of Nebuchadnezzar's image,—the weight of

* I must do Dr. Hope the justice of saying, that the above description of the diastolic sound is a very good one. I have hereafter to prove that it is not the second but the first sound. I may also be allowed to state, in justice to myself, that had I observed the remarkable coincidence between it and the description I have given in my first paper, I should most freely have acknowledged it.

which causes the whole to crumble in pieces.

Proofs of Dr. Corrigan's Theory.

I shall now extract some of the truth from the ruins, and use it clothed in Dr. Hope's own words, as I have already done with his cases, for the purpose of establishing Dr. Corrigan's theory.

It is quite true that, as Dr. Hope states in his fifth conclusion, "the ventricular systole is prolonged through the interval which intervenes between the first and second sounds." That it is true, is proved by the experiments on the ass. It, taken by itself, directly supports that essential part of Dr. Corrigan's theory, which is, that the systole begins from the first, and ends in the second sound.

Again, as the interval between the first and second sound is thus filled up by the ventricular systole, the diastole *must* be performed during the long interval, *i. e.* between the second and first sounds; which is another essential point.

It is also true that a sound (diastolic sound) is produced by the ventricular diastole . . . when the "blood shoots . . ." into the ventricle, and its course "is abruptly arrested by the completion of the diastole," &c. Therefore, as a sound is produced at the termination of the diastole, and, as we have shewn, the diastole occurs *after* the first sound, it follows that the production of the first sound is at the termination of the diastole; which doctrine is most essential also to our theory.

This completes the series of the time relations of the heart. We will now consider the *causes* of the heart's sounds and impulse, as proveable from Dr. Hope's observations.

As the diastolic sound is "produced by the ventricular diastole," with the "rush of blood," &c. and as this diastolic sound cannot be the second sound, because we have proved the diastole occurs *after* the second sound, it follows that the first sound is the diastolic sound, and therefore that the first sound is caused by the ventricular diastole, &c. This is also an essential element of our theory.

Again: the impulse being coincident with the first sound, and having the

same conditions, it is fairly inferable that the ventricular diastole, with "*all its concurring circumstances*," is also the cause of the impulse. This is the most prominent doctrine of the whole, and deserves the reader's especial attention.

That this was the fact observed in the ass, is evident from Dr. Hope's own words (p. 787). "Hence one of the party (Mr. Lane) expressed his opinion that it was the *diastole*, and not the *systole*, which occasioned the impulse. This opinion rendered it immediately necessary to repeat all our observations." The observations were resumed, and Dr. Hope would make it appear that all the party were satisfied—about what?—of quite a different thing: viz. that the first sound and impulse were synchronous. This is literally legerdemain, with a witness. It does not appear that Mr. Lane in the least changed his opinion, and I dare say never will.

Again: as the diastole of the heart produces the first sound, and as it cannot also produce the second sound, another cause must be sought for: but it appears that the second sound happens at the termination of the ventricular systole, because Dr. Hope says that the latter "is prolonged through the interval which intervenes between the first and second sounds." Now this termination is either attended with a collapse of the ventricular parietes or not. If there be a collapse, which I do not deny, a sound will be produced; for it may be proved that two surfaces cannot strike together without noise. On the other hand, if we suppose that there be no collapse, or that (in Dr. Hope's words) the "ventricle never contracts fully;" then the explanation I have given in the first paper will hold good, unless we suppose that the laws of nature are suspended in the case of the heart.

We have thus a complete chain of evidence made of the metal mingled with Dr. Hope's theory, which is sufficient to confirm every fundamental doctrine of Dr. Corrigan; *for the non-coincidence of the pulse with the impulse at the chest, is rather an illustrative fact than an essential doctrine.* If there be any truth mixed with Dr. Hope's doctrines, Dr. Corrigan's theory must be true.

There is one more doctrine which Dr. Hope has borrowed from Dr. Corrigan and M. Pigeaux, which I have endeavoured to illustrate by an experiment (No. 6) in my first paper. This doctrine, taken by itself, is, I think, sufficient to establish, or at least to confirm, Dr. Corrigan's theory. Dr. Hope expresses the doctrine in the following words (*Med. Gaz.* vol. vi. p. 937):—*"All the phenomena, however, of the heart's action, both in health and disease, clearly lead us to believe that the sounds are occasioned solely by the motion of the contained fluid."*

I will, however, first endeavour farther to illustrate this doctrine.

In the experiment referred to, it appeared that, in an exsanguineous heart of a rabbit which was killed with hæmorrhage, there were no heart sounds. The heart was empty of blood, as shewn by the paleness of its large vessels; its actions were strong; its propulsions, *i. e.* the lengthening of the heart's axis during its diastole, powerful; yet *no sounds could be heard, nor impulse felt.*

Experiment 8.—A rabbit younger than the former was properly secured; an incision was made through the mesial line of the sternum, the pericardium was freely opened, and the heart fairly exposed to view. The respiration continued natural. The heart floated in a small quantity of blood from hæmorrhage, which easily stopped by the application of cold water. The contrast between this heart and the former was very striking. Instead of the violent propulsion, there was but little motion perceptible to the eye. When the stethoscope, however, was firmly held to its sides, or apex, the heart being held in my fingers *out of its seat*, the proper impulse and sounds could be heard and felt, strong and loud. The pulse counted the same as before the experiment (304). The impulse communicated to the fingers was strong and jirking*, very unlike the propulsion in the former heart; it gave a sensation as if caused by fluid within, not very unlike the arterial pulse†.

These experiments prove that the tilting of the apex against the ribs (the old doctrine) has nothing to do with the production of the impulse and sounds, for they were produced when the heart was lifted out of its seat, and not touching the ribs; neither also by striking against the instrument, for the sounds could be heard without the stethoscope; nor could the *impulse* be produced by striking the stethoscope, because, during the observation, the cylinder was held firmly against the heart, which, of course, would preclude striking. They plainly demonstrate that the sounds and impulse are caused by the motion of the fluid within the ventricle; call it by the name of frottement, rushing, or dashing—which you will.

The present use I would make of this doctrine is, that as I have proved by my experiments, as well as from the observations of Dr. Hope, that a check to the motion of the blood is conditional to the sounds; and that this check happens only at the extreme diastole and extreme systole of the ventricle, it follows that the sounds will mark the extreme diastole and systole. Again: if we allow, which universal experience proves, that the check to the motion of a larger quantity of fluid produces a graver tone than when given to that of a smaller quantity*, it follows that the graver sound will mark that state of the heart in which it contains the larger quantity—namely, its extreme diastole; and, as a corollary, the acuter sound will denote the extreme systole. The first sound, then, being the graver one, and the second sound the acuter one, the first sound must mark the extreme diastole, the second sound the extreme systole, of the ventricle: which expressions may be considered as an almost

leaped about, and took his food as usual. It lived nearly a week, and died after exposure to a night of severe frost, being lively till an hour or two before its death. On examination the pericardium was thickened, adherent to the heart; the latter also thickened; lungs quite healthy. External incision (approximated by sutures) united. Sloughing under the integument extensive.

* If the reader should doubt that the check to a larger quantity of fluid will occasion the graver tone, let him try the following easy experiment. Shake, with some violence, different quantities of fluid in the ordinary apothecary's phials, and he will find that the gravity of the note will be as the quantity; depending little, if at all, on the size of the vessel.

* The impulse communicated directly by the heart to the hand was observed in Dr. Hope's experiments on the ass.

† The animal did not appear to feel pain, except from the first incision through the integuments. After the experiment the animal was lively,

complete description of our theory. I, of course, consider this merely as collateral argument.

Might not the tone, *i. e.* the note of the first sound, considered apart from its dulness or sharpness, its length or shortness, be a good symptom to assist in the diagnosis of the heart's dilatation?

I owe perhaps to my reader some explanation for what some of my friends have considered a degree of severity towards Dr. Hope. My excuse is, that I could not be just towards him without being severe. If the reader has perused Dr. Hope's papers, he will have perceived that instead of meeting Dr. Corrigan's arguments fairly and candidly, there is a perpetual, though fruitless attempt, to lessen that gentleman's credit and authority, by endeavouring to nullify his experiments and falsify his observations; for which now, but too late, he feebly apologizes. I am myself personally unacquainted with both parties, yet for the reason stated I felt a degree of disgust on the occasion. Yet even under this impression I have been just, and even candid, towards Dr. Hope: I have fully allowed the correctness of his experiments and pathological observations, which are indeed valuable, as they fully confirm the true theory of the heart. I have even spoken favourably of his talents—have allowed him to be "a sensible man." His arguments only have I disproved.

The reader will perceive that, in his last paper, he has pursued the same course as before;—remarks derogatory to the professional respectability of his opponent—grounded on mis-statements and mis-quotations, as I have proved—form the basis of that composition.

The man who fights with unlawful weapons must expect to be beaten out of the lists.

After these literary delinquencies Dr. Hope has no right to expect, nor will I again descend to an altercation with him. Yet if he will and can enter the fair field of controversy, which he has not yet even attempted, I will pay him as much attention as if I had never seen his writings; I will avoid every expression which would be unpleasant to the most irritable feelings.

I will also state that I mean no personal offence to Dr. Hope by any of my remarks, and I will at the same

time take the liberty of advising Dr. Hope, who is evidently a young man, not to engage in a public controversy again till time has taught him that "the application of physiological principles to explain disease, is difficult."

I had prepared a series of experiments and observations, for the purpose of meeting the objection to our theory arising from the supposed want of coincidence of the arterial pulse at different distances from the heart: this has delayed the present paper, and to my disappointment I find, that from want of room, they must be deferred to another opportunity.

[It is proper, in reference to the note appended to the preceding part of this paper, to state that Dr. Hope, when he sent his last communication, intimated his intention of declining to continue the controversy.]

THE GUACO.

To the Editor of the London Medical Gazette.

SIR,

IN the Medical Gazette, vol. vi. p. 507, there is a short notice of a paper which was read at the College of Physicians, containing an account of some experiments, which I had been enabled to make through the kindness of the president with the "mikania guaco," a plant which is said by the inhabitants of South America, and some of the West India islands, to prevent or cure the bites of poisonous serpents and rabid dogs. The quantity which I possessed was not sufficient to investigate the subject completely, but I ascertained that it did not *prevent* poisonous serpents from biting animals which were under the influence of the reputed preservative, nor did it seem to do more than mitigate the symptoms of rabies or hydrophobia; it did not seem to retard the fatal result either in man or the dog. Still, however, the belief in the efficacy of the medicine is so strong—it is so widely diffused—and has continued so long, that although I am inclined to think the accounts we have received are

much exaggerated, it is well deserving of further trial, as even palliation of the frightful symptoms of hydrophobia is yet a desideratum. On this account I avail myself of your journal to inform the members of our profession that I am in possession of some more of the plant, which has been sent to me by Sir Robert Kerr Porter, from the Caracaeas, some of which I shall be happy to give to any medical man in London, or its neighbourhood, who meets with a case of hydrophobia, in order that its virtues may be again put the test.

It might appear superfluous, perhaps, to allude to the necessity of accurately distinguishing hydrophobia from other diseases, and yet it is singular to what an extent the apprehensions of the public have been erroneously led with regard to the prevalence of this disease. During the last year, rabies was particularly prevalent among dogs, and the newspapers were constantly full of accounts of mad dogs and cases of hydrophobia, and yet when a return was ordered by the House of Commons of the number of cases which had occurred in the preceding year in all the metropolitan hospitals, it appeared that the instance which I alluded to in my paper, in which the guaco had been tried, was the only one which had been admitted into them. One case, which had been detailed most circumstantially and frequently by the daily press, was that of a poor man, who had died, as I learned, from the physician who attended him, of delirium tremens from drunkenness; nor were these mistakes made only by the public, but unfortunately some medical men have themselves contributed to encourage the popular fears by their ignorance of the disease: one gentleman, for instance, in giving his evidence at a Coroner's inquest, expressed his opinion that the patient had died of hydrophobia, and the verdict was recorded upon this evidence, the patient having in reality died a *few days* after the receipt of the injury, no doubt (if the report of the evidence was correct) from the irritation of a lacerated wound.

It is not, therefore, so much the frequency of hydrophobia as the extraordinary, and uniformly fatal nature of the complaint, which induces me to request you to give effect to Sir R. K. Porter's humane exertions, by giving pub-

licity to this letter, in order that the medicine may be employed whenever an opportunity occurs.

I am, Sir,
Your obedient servant,
CESAR HAWKINS.

31, Half-Moon Street,
Jan. 26th, 1831.

MEDICAL JURISPRUDENCE.

ILLUSTRATIONS OF

PROFESSOR AMOS'S LECTURE ON MEDICAL EVIDENCE;

Published in our last Number.

Hearsay Evidence generally inconclusive and worthless.

Mr. Amos cited the following passage from the Attorney-General's speech in the Gardner Peerage case, observing that the Attorney-General was not the counsel of either of the litigating parties, but appeared in a sort of judicial character on that occasion. Mr. Amos's object was to illustrate the manner in which a gentleman of acknowledged talent and skill in his profession might be misled, by statements made without any design of deceiving, but which had not been subjected to that admirable touchstone of truth, an examination by opposing counsel in open court; and generally, to exhibit the fallacies to which hearsay testimony is liable. We think the example instanced by the learned Professor affords a strong argument in favour of the practice of English courts of justice, in excluding hearsay evidence, over the French system.

We then come again—and he is a most important witness—to the evidence of Dr. Granville. Objections had been made to his testimony, because the instances he produced were some of them not in his hand-writing, and some entered from the books of others. Your lordships were of opinion the evidence was not legal, and Dr. Granville was called to supply those defects, and he gave evidence to a considerable length. Objections were made, which were allowed by your lordships, and the result was, that, on his second examination, Dr. Granville gave no evidence that was admitted by your lordships. On his third examination—I will take the two together—he says, “I now have a case of a very extraordinary kind, for I have a wit-

ness, Mary Parker, whom I will produce before your lordships: she is now in a state of pregnancy, and she has gone with her child a period of eleven months, and I cannot be deceived." Now let me call your lordships' attention to the evidence of Mary Parker. When she was produced at the bar she appeared to be with child. She was asked, "Are you at present in a state of pregnancy?"—"Yes." "How long have you been in that state?"—"I think nearly about eleven months." Here was a case of eleven months' gestation, which Dr. Granville was prepared to state as one which had occurred under his own observation. The fact was, she was suckling; during the period of suckling an appearance took place; that appearance was not renewed again the next month, but at the expiration of the second month the child did not suck, and the woman therefore gave over suckling. Nearly nine months elapsed from the period of her giving over suckling: how did she reckon then? "I had an appearance eleven months ago; I had no appearance the month after that, and as nine months had elapsed since that time, I add the nine to the two, and I have been in a state of pregnancy for eleven months." Upon this she was subjected to a further cross-examination, and your lordships will see how the story tells. "Are you able to state when it was that that last appearance took place?"—"Yes; it took place the latter end of this month twelve-month." "The latter end of July in last year?"—"Yes." By a lord: "Did that appearance take place during all the time you were suckling?"—"No, only that once; that was all." "You continued suckling afterwards?"—"Yes." "And it did not take place again?"—"No." "During the time you were suckling, were you ever as women usually are?"—"Only that once." "When was that?"—"The latter end of July last year." "After that you continued suckling?"—"Yes, till the doctor who attended this little girl said it was the milk that made the little girl very ill." "And then you left off?"—"Yes." "The milk made your little girl very ill just nine months ago?"—"Yes." "And then you left off?"—"Yes." "Did you yourself feel at all different just about that time?"—"Yes, and so my mother thought the same, from my appearance." "How did you feel?"—"I felt just the same as I did with my first child." So that the first thing that struck her was that her child turned sick, which it would do, in all probability, from the conception: it does not appear that that was longer than nine months ago. Here your lordships, I am sure, must feel that it is very happy that we have cases of this kind. Dr. Granville says, "I have a clear case of eleven months; I will prove it from my register." That appeared certainly upon the

registers when they were produced. The witness is called herself, and on her examination the whole calculation is overturned, and there is nothing to satisfy any reasonable mind that she had gone more than nine months with child*.

Importance of Watchfulness on the part of Medical Men.

The following evidence from the trial of Patch, for the wilful murder of Mr. Blight, was quoted and commented on by Mr. Amos. It is important (as the learned gentleman observed) inasmuch as it shows the manner in which medical men are liable to be among the most material witnesses in criminal prosecutions; not only as regards their testimony as to medical facts, but from their being among the first persons called in after a violent injury received, and therefore made witnesses of conversations and actions bearing most materially on the guilt or innocence of persons accused of crimes.

Mr. ASTLEY COOPER sworn—Examined by Mr. CONST.

Q. You were called in, I understand, soon after Mr. Blight was wounded?—A. About three hours after.

Q. State the situation in which you found him, and what passed while you were with him?—A. I found him lying upon the floor of the room, which, I understood, was called the back parlour. Mr. Jones, the surgeon, who had brought me there, just pointed out the wounds which were existing upon his body; but in the crowded state in which the room was, and he lying upon the floor in a very inconvenient way for examination, I desired that he might be carried up stairs to bed.

Q. That was done for him?—A. This was done, and then finding still the room much crowded, I ordered every person from the room, except Mr. Jones, the surgeon, who called me there, Mr. Younger, a surgeon at Rotherhithe, Patch, the prisoner at the bar, and a Mr. Ferguson.

Lord Chief Baron—Q. Who was he?—A. Ferguson, I understood, was a friend of the deceased.

Mr. Garrow.—One of the executors.

Witness.—I then examined into the state of the wounds: I found that there was one wound on the fore part of the body, about two inches from the navel, and that on the right side; another wound in the loins on the same side: the anterior of these wounds,

* Report of the Proceedings of the House of Lords on the Claims to the Barony of Gardner. By Le Marchant, 1828, p. 313.

that nearer the navel, having the common character of a gun-shot wound, of a body having entered with great velocity. Upon examining those wounds with attention, I saw the contents of the bowels passing from each of them out of each wound, and as his body was already considerably distended and inflated, I pronounced the wound to be mortal, recommended a light dressing upon it, and that he should be kept as free from pain as possible by opiates.

Q. You stayed some time, I understand, in the house?—A. I stayed until the next morning about seven o'clock.

Q. Did you then see the deceased?—A. Yes, very soon after that, I was satisfied at seeing the nature of the wound; finding it was mortal, it naturally struck me it was my duty to inquire, as far as it was in my power, as to the person who had committed the act, and that of the person who had suffered the wound.

Q. Was this in the presence of the prisoner?—A. Yes, in the presence of Patch; and in the presence of Mr. Ferguson, I said to Mr. Blight, "Is there any person whom you suspect to have committed this act?" His answer was, "No, God knows, I never did any man an injury which could lead him to wish to take my life; but," he added, "Mr. Patch has mentioned to me a man of the name of Webster." I then turned to Patch, not wishing to press any unnecessary questions upon the deceased, and said, "Who is this Webster?" He answered, "He is a man who was suspected of having robbed these premises, against whom a search-warrant was granted, and his house was searched, and his son has since absconded."

Q. Had you any further conversation?—A. Upon this, my Lord, I said, "Surely, then, you should send immediately to Bow-Street to have officers down; his premises should be again searched;" to which Patch answered, "No, for nothing would be found, and if nothing was found, I should certainly be shot."

Lord Chief Baron.—Q. Speaking of himself?—A. Speaking of himself, "I should certainly be shot," or words to that effect; "I shall certainly be shot," or "they will certainly shoot me," which of those expressions I don't know*."

LUNACY QUESTION.

To the Editor of the London Medical Gazette.

SIR,
THE following observations, in answer to a question proposed in a recent num-

ber of your Journal as to the construction of the act of Parliament concerning lunatics, may not be unacceptable to your readers.

It is an express maxim of the Common Law, that a man cannot stultify himself (Beverley's case, 4th Reports). The policy of this principle is obvious; for if a person could, upon his own request, be declared insane, and fix the date of his insanity, he might avail himself of this privilege to invalidate previous deeds and contracts, and escape the punishment of previous crimes. Fitzherbert, however, (Natura Brevium, p. 202,) argues strongly that a man may plead his disability to avoid his own acts, which doctrine is denied in Stroud and Marshall (Cro. Elizabeth, p. 398). Blackstone agrees with Fitzherbert. Of course an instrument executed when the party executing is insane, or even intoxicated, is void. The principle is well stated by Lord Stowell in Turner and Meyers, (1st Haggard, p. 414) "I conceive," said his Lordship, "it is perfectly clear in law, that a party may come forward to maintain his own *past* incapacity;" but it never could be contended that a man might vitiate his acts on the plea of being *threatened* with insanity or any other misfortune.

When an act of Parliament prescribes the form of the certificate, such form must be adopted; and acts of Parliament in restraint of liberty must be construed strictly: whence it follows, that the proposed form of certificate, violating the words and intention of the statute, should not be substituted for the form of certificate given by the act. The object of the act was to prevent any but insane persons from being confined in mad-houses; but persons threatened with insanity are not insane, and therefore cannot be deprived of their personal liberty. It would be dangerous to the liberty of the subject, and repugnant to the constitution, to imprison men *on a suspicion* that they would become insane. And as medical men differ so widely as to what constitutes actual insanity, much more would they differ in opinion as to the acts which threatened insanity. *Ira furor brevis est*, might be the maxim of fanciful practitioners. To confine upon insanity threatened, in order to prevent its possible occurrence, would be just as judicious as to imprison the subject for fear he should commit robbery or

* The Trial of Richard Pate for the Wilful Murder of Mr. Isaac Blight, 3d edit. 1806, p. 48.

murder. Such plans are excellent preventives; if, for example, prodigal waste of property should be considered a threatening of insanity, Bedlam would be speedily filled with inmates.

In the case put there can be no inconvenience; for if the patient wishes to submit himself to medical treatment before he is mad, in order to ward off the madness, may he not do so in his own house as well as in a lunatic asylum?

The danger of such doctrine as the above is demonstrated by the letters which have been written upon the subject; for the writer of the first letter*, the querist, states that his patient is apprehensive of insanity, in the certain recurrence of which he, the writer, believes; whereas, the author of the second letter† concludes that, from the matter stated in the first, the patient is actually insane, and that so the act is sufficient to meet the case.

Yours, &c.

A BARRISTER.

Temple Chambers.

MEDICAL GAZETTE.

Saturday, February 5, 1831.

"Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

NEW LUNACY BILL.

It is proper that the members of the medical profession should be aware that the act "to regulate the cure and treatment of insane persons," which was passed in 1828, and which was to remain in force three years, expires on the 31st of July next. Of the bill in question we expressed our opinion and disapprobation while it was in progress through the House of Commons, nor has any thing which has subsequently taken place tended, in any degree, to change our sentiments. But our especial motive for adverting to the subject at the present moment is to inform all whom it may

concern that a draft of a new bill has just been printed, and addressed to the proprietors of licensed houses, by the instructions of Mr. R. Gordon, one of the metropolitan commissioners in lunacy, with a request that such remarks may be made upon it, "either by way of comment or alteration, as shall appear desirable for perfecting the objects of the proposed act."

This publicity—this courting of investigation before the final decision—is an act of courtesy for which Mr. Gordon deserves the thanks of the community. Perhaps the experience derived from a former occasion may have afforded a useful lesson, and led to a mode of proceeding so obvious and rational, that but for the contrast it presents to the measures formerly adopted, we should scarcely have thought of remarking upon it. In 1828, when the existing act was framed and introduced, no notice was previously given to any proprietors of establishments for the insane, of the intention to apply to the legislature on the subject, and no medical men of experience in such matters were consulted on its provisions. No general inquiry into the state of houses licensed for the reception of lunatics had been instituted since the year 1816, and the only investigation of any kind which seems to have been made, or taken as the grounds of legislation, was that of 1827, in reference "to the treatment of male paupers," belonging to various parishes, who had been placed in one particular establishment, viz. the White House, Bethnal Green. It is impossible for a proceeding more preposterous than this to be imagined: at the institution in question the poor, collected from different parishes, were maintained at the scanty allowance of twenty pounds per annum for every thing—board, lodging, and medical attendance; and from this standard the members of the committee seem to have formed their opinion of

* Med. Gaz. p. 523.

† Ibid. p. 560.

private lunatic establishments in general—at least this was the only evidence called before passing acts applicable to the latter, as well as the former. We were far, very far, from deprecating the whole measure, or underrating the benevolent intentions by which the framers of the bill were actuated, but we greatly questioned the sufficiency of their knowledge, and we earnestly protested against those injurious suspicions of the medical profession, which shone through every clause. It is just, reasonable, and humane, to secure to the unhappy pauper all the comfort that his situation admits of, but it is to be kept in mind that narrow indeed for such a pittance as we have mentioned, must be the limit of his enjoyments. It is absurd for such a sum to expect much of the proprietor of such an establishment, and it is no less absurd to judge of other institutions by those for paupers: it is just as wide of the truth as his estimate would be who visited a parish work-house to form an idea of the manner of living adopted in their private houses by the gentry of England. Not only, however, was no sufficient evidence adduced, but those whose professional conduct was to be regulated, and whose property was so deeply affected by the proposed measure, were in utter ignorance of such a bill being in the House of Commons till it had already made considerable progress; the consequence was that the bill was originally one of the most extraordinary, crude, and arbitrary, that ever was brought before parliament.

A few medical proprietors of houses for lunatics, embracing the most eminent physicians practising in cases of insanity, took the alarm, and combined—not to oppose legislative regulation, for that they unanimously considered as desirable, but to procure such ameliorations and amendments as should render the bill more liberal in its prin-

ciples, and more effective in its provisions: howbeit, the bill passed the lower house almost without a comment, little altered, and nothing improved. Had there been but a few medical men in parliament, this could scarcely have occurred.

No alternative remained but to petition the Peers to be heard by counsel, and to print and circulate among them some "observations," stating the chief arguments of the petitioners against the measure. Among their objections we do not find personal interests forming any prominent consideration, although it appeared in evidence before the committee of the Peers that sums of from ten to fifty thousand pounds were involved. They seem, however, to have felt that the moral, as well as professional character of the faculty was attacked; and with a due respect for themselves, as honourable members of that faculty, they properly represented that "far from encouraging medical men to study the treatment of insanity, and to undertake the care of lunatics, as suggested by the committee of the House of Commons in 1815, the bill, as it is now arranged and presented to the House of Peers, tends to debase the whole profession, for it betrays a total want of confidence in their moral and medical character; so much so, indeed, that if the bill pass into a law, no medical man, who has any regard for his professional reputation, can undertake the care of lunatic patients, either as proprietor or superintendant of any house for their reception, or as a regular attendant on the patients in it.*"

It would be endless to quote the many incongruities, contradictions, and arbitrary and severe provisions, in the original bill, or in the present act, reformed and amended as it was in its passage through the House of Peers. Every clause bore evidence to ignorance

* A few Observations, &c. pp. 4, 5.

of the subject, or indifference to the interests of the parties immediately concerned;—and no other conclusion could be inferred by those who read the bill, than that there was no principle of honour or humanity remaining among medical practitioners. That our readers may be able to form some judgment in what degree of respect the framers of the act held our profession, it is only requisite to mention one enactment, namely; that if, upon conviction, the imposed fine were not paid, the proprietor, were he a fellow or licentiate of the College of Physicians, or member of any other medical corporation, was *to be committed to the House of Correction, and be kept to hard labour* (i. e. the treadmill!) besides be liable to the forfeiture of his license, and consequent destruction of his property*.

Lord Eldon in discussing *one* portion observed, that *twenty misdemeanors* might be committed under that particular clause.

But the old bill will soon pass to the tomb of all the Capulets: let us look to the new one, its successor. Mr. Gordon, in the printed circular which accompanies the draft, states, that in order “to elevate the character of public receptacles for the insane, and to remove any feeling of degradation which may be attached to words applied in legislative measures to inferior subjects,” proposes to substitute the terms “Retreat” and “Register,” for “Licensed House” and “License,” used in former acts. This, at first sight, appears something like increased respect, resulting from a more intimate acquaintance with “mad-houses,” and the system pursued in them. Perhaps the Lord Chancellor will take the hint, and when, in the House of Lords, he next speaks of physicians devoted to the treatment of insanity, substitute some other term for that of “mad-doctor,” a designation

which, chiefly through his mode of applying it, has become little short of opprobrious.

A closer examination of the draft, will soon satisfy the inquirer, that if Mr. Gordon has imbibed greater respect for “Licensed Houses,” his estimation of the medical character has undergone no change.

Here, however, we are compelled, by a notice from our printer of “lack of space,” abruptly to break off. We have sounded the note of alarm: let it rouse the attention of our brethren to the bill, before it be too late, and the appeal will not have been made in vain. We shall return to the subject in our next.

COLLEGE OF PHYSICIANS.

Sir Henry Halford on the Influence of some of the Diseases of the Body on the Mind.

THE first meeting of the season, at the College of Physicians, took place on Tuesday evening: it was attended by a large number of men of science, and distinguished members of the three learned professions. Among them were, the Lord Chancellor, the Archbishop of Canterbury, the Bishop of London, Lord Tenterden, the Vice Chancellor, the Master of the Rolls, Mr. Baron Vaughan, several of the Judges, the Attorney-General, &c. &c.

Sir Henry Halford took the chair, as President, and proceeded to read a paper which was listened to with the deepest attention, and of which we subjoin an account. The essay had for its object to pourtray the influence of diseases of the body on the mind, and to discuss certain questions relating to the duties of the physician immediately connected with this subject.

The effects of the passions on the body have been elegantly illustrated by Sir G. Baker, nor is the converse of the pic-

* Ibid, pp. 14, 15.

ture less interesting. The influence of disease on the mental faculties is various and extensive — now communicating “temporary power,” and now “permanent weakness;” while so characteristic are some of these changes, that the physician is often able to discover, by attention to these secondary effects, what organ is at fault, without calling into play all those appliances which are usually adopted, in order that the whole case may be fully unfolded. Nor are the diseased conditions at all proportionate in danger to the degree of mental affection which they produce: a simple derangement of the digestive organs lays a weight upon the mind, rendering the individual irresolute and infirm of purpose; whilst an inflammation of the brain, if it be slight, gives intensity to his faculties and animation to his imaginings.

Sir Henry stated it to be his intention to give only an outline of the effects upon the mind produced by some of the more marked and simple chronic diseases, leaving it to his hearers to fill up the details from their own experience.

Of apoplexy little was to be said, because before the attack the patient is generally merely torpid, and after it has occurred is insensible to all around; so that, however momentous or interesting to others may be passing events, “nothing touches him.” To apoplexy succeeds palsy, and happy he (said the learned President) “whose mind shall have been disciplined when in health, and whose moral habits shall have been well regulated by reason and by good principles before he was taken ill; for otherwise, as all the passions are let loose by the malady (at least this is the case in many instances of palsy), whilst the controlling power is enfeebled, an irritability succeeds which makes life intolerable to the sick man himself and to all around him.” The picture of this melancholy state was farther coloured by vivid description, and illustrated by reference to the cases of the Duke of Marlborough and Dean Swift.

“From Marlbro’s eyes the tears of dotage flow,
And Swift expires a driveller and a show.”

Epilepsy, so much the terror of others, carries not mental suffering to the patient himself: he sleeps after the paroxysm, and awakes unconscious of what has passed. Repetition of the

fits, however, weakens the intellect, and ultimately leads the way, in many cases, to madness or fatuity. This, however, does not apply to epilepsy which is merely sympathetic of derangement of the alimentary canal, or the fore-runner of some eruptive disease, or other transient derangement. In this way were Julius Cæsar and Mahomet epileptics. In pulmonary consumption the frame is often lighted up, and every thing looks cheering to the patient, where the friends and medical attendant see the prospect inevitably ending in the tomb. The frame of mind in a hectic girl, with all the buoyance of youth, was then contrasted with that of a female more advanced in life—at the period when the menses cease: the former all hope, and the latter all despondency. This contrast the pathologist might perhaps attempt to explain by referring to the different conditions of the circulation in the two. The blood in the younger may be more oxygenated, from its more rapid circulation through the lungs; while, in the elder, there is a stagnation about the vena portæ, giving rise to hypochondriasis, and connected with the more loaded state of the venular and hæmorrhoidal veins, from the cessation of the menstrual discharge.

The learned President next adverted to those cases in which the heart and great vessels were diseased. In these the paroxysms are dreadful, but the intervals are comparatively tranquil—like the calm which succeeds the tempest. Such patients, indeed, are “full of life,” and often are much less dejected than those who suffer only from derangement of the stomach. Their condition illustrates the observation of Paley, with respect to pain—“that its pauses and intermissions become positive pleasures; that it has a power of shedding a satisfaction over the intervals of ease which few enjoyments exceed.” That mere pain does not affect the faculties to any great extent, is also manifested by what we witness in the douloureux and iliac passion; in which last, many days and nights of misery frequently are insufficient to impair the judgment of the patient, or destroy his hopes. “From such sufferings as these (added Sir Henry, nearly in the following words) death may well be considered a happy release: indeed, before the glad tidings of pardon and peace in a future life, on certain conditions, had

been proclaimed to the world by our Redeemer, so much intense suffering, nay, much less than that which is endured by a patient under fatal ileus, was considered by the most enlightened Romans as a sufficient reason for ridding themselves abruptly of life. The first book of Pliny's Letters furnishes us with two instances of friends of his, one of whom had recourse to this apparently common practice, and the other intended to resort to it if the physician should pronounce his malady a mortal one. Their creed admitted an independent exercise of their free will and pleasure in the disposal of their lives. "*Ipsæ dens, simul atque volam, me solvet; moriar—mors ultima linea rerum est.*" But the Christian has a higher motive for submitting himself to the will of heaven, and for bearing his sufferings patiently."

Upon the whole, Sir Henry has been astonished that so few of the great numbers to whom he has ministered in their last hour have been reluctant to part with life. Some, indeed, have clung to it with painful anxiety; but this has been more frequently from the agony of leaving their children to the mercy of the world, than from mere love of life. This part of the subject led the learned author of the paper to speak of the duty of the physician, in withholding from, or communicating to, a patient the probable issue of a disease displaying mortal symptoms. He stated it to be his opinion that the first duty of the physician was "to protract the life of his patient by all practicable means," to interpose between him and whatever was calculated to aggravate his danger; and that, unless the patient should be averse from doing what is necessary in aid of the remedies, owing to the want of a proper sense of his danger, the medical attendant ought not to step out of his province to offer advice; at the same time he held it to be indispensable that the friends be informed of the danger the instant it is discovered. It is far better that friends should undertake the delicate task of suggesting to the patient, at proper times and under the guidance of the physician, the necessity of arranging his worldly affairs, and preparing for his momentous change. But there may be no friends present—no one near him from whom the intimation of his danger would come with propriety; under such circumstances, Sir Henry

said that he should feel warranted in departing from his strict professional duty, and apprising the patient of his condition.

The part of the paper which followed was listened to with peculiar interest, from the direct relation it bore to the case of his late Majesty, as well as from other circumstances connected with some of the eminent individuals who were present. If discretion be required by the practitioner with regard to cases attended with danger in private life, this becomes doubly requisite in a personage "of a station so elevated, that his life becomes an object of anxiety to the nation." The public, in their solicitude for the recovery of such a patient, frequently desire disclosures incompatible with his safety. The bulletins may become known to the Royal sufferer himself, and it cannot be admitted for a moment, that to relieve the anxiety or gratify the curiosity of the public, the physician ought to do any thing to endanger the life or comfort of his patient. "But (added Sir Henry) whilst it is his object to state as accurately as possible the present circumstances and the comparative condition of the disease, he will consider that conjectures respecting its cause and probable issue are not to be hazarded without extreme caution. He will not write one word which is calculated to mislead; but neither ought he to be called upon to express so much as, if reported to the patient, would destroy all hope, and hasten that catastrophe which it is his duty, and their first wish, to prevent. Meantime the family of the monarch, and the government, have a claim to farther information than can with propriety, or common humanity, be imparted to the public at large. In the case of his late Majesty, the King's Government and the Royal Family were apprised as early as the 27th of April*, [Sir Henry held in his hand the original letters which gave information to the Prime Minister,] that his Majesty's disease was seated in his heart, and that an effusion of water into the chest was soon to be apprehended." It was not until the end of May that an opportunity occurred of acquainting his Majesty with his real situation. He then appointed an early day for receiving the Sacrament, and

* The late King died on the 25th June.

expressed himself as having derived great consolation from this exercise of devotion. After this Sir Henry thought himself warranted in interpreting the symptoms as favourably as they would admit, and was thus enabled to rally the spirits of his royal patient in the intervals of his suffering, and prevent him from dwelling on the painful contemplation of death until a few minutes before he expired.

We have on former occasions expressed our opinion of the tendency of these meetings, and we see no occasion to alter or qualify what we then said. Such an assemblage of men, distinguished for their rank, learning, and eminence in the state, within the walls of the College of Physicians, cannot fail to impress upon the public mind a just estimate of the honour and dignity of the medical profession.

ROYAL INSTITUTION,

Friday, Jan. 28, 1831.

GEORGE MOORE, ESQ. F.S.A. VICE-PRES.
IN THE CHAIR.

Miscellaneous Notes.

THE most favourable report that we can make of the lecture or oration, be it which it might, professing to treat "on the Determination of the Age of Rocks of supposed Igneous Origin," will be to say nothing about it. We freely confess we were at fault during the whole time of its continuance, and never once could surmise what the opinion was which the speaker concluded by declaring, that although opposed to present doctrines, "will be borne out by every future discovery." Our dilemma—which we afterwards learned was not singular—might, however, arise from a circumstance premised in the exordium to the address; namely, that common words are by some persons used with meanings very different to those in ordinary acceptance. This perhaps was intended to be illustrated in the succeeding speech, and therefore

we shall patiently await the arrival of those "future discoveries" before we admit that in our minds they have wrought conviction.

The library this evening was splendidly supplied with natural curiosities and works of art, which excited very general interest. Amongst the rest a "head of Voltaire, modelled from life," drew no inconsiderable share of attention: it is a finely executed bust in wax, and were we craniologists—we beg pardon, phrenologists?!—we should cite it as an admirable illustration of our would-be science, for although the frontal aspect is commanding, the posterior developments fearfully predominate, and the sentiments towering on the animal propensities threaten to mislead, if not to overwhelm, the intellects peculiar to the mind of man.

Mr. South's metallic chimney linings, by which soot is to be annihilated and fire extinguished—by which London is to be deprived of its canopy of smoke, and the citizens enabled to view the untarnished face of heaven in town, form very pretty mechanical models. How far they would answer the ends proposed, if brought into general use, we must again leave "the future to determine."

Mr. Knight's steel hone must certainly, by the force of capillary attraction, keep the oil always at the point of contact of the blade with the hone; but, in fairness, we must repeat what we heard advanced in its *behalf*, that it is likewise well adapted for speedily wearing out all razors that it sharpens.

The South American minerals, presented to the institution by Mr. Bollaert, are some of them very rare and beautiful: the native muriate(?) of copper is a splendid specimen.

On the table we likewise noticed, along with iron ores from Nassau, some fossil wood from Marianstadt, accompanied with the following memorandum:—"Large and small specimens of natural charcoal from a mountain near the Convent of Marianstadt, in the Duchy of Nassau. The greater part of the mountain seems to be formed of this production, as it is found in enormous masses, and appears inexhaustible. Portions of it are entire branches of trees, of various dimensions, which break off on being touched, and are highly inflammable."

We must not omit to notice two fine

specimens of silver reduced from English argentiferous lead ore, and weighing between 800 and 900 ounces; for they were peculiarly interesting as affording excellent examples of those extraordinary semi-crystalline configurations which that metal assumes when suddenly cooled. Silver, as is well known, has been esteemed a "noble metal," on account of its resisting oxidizement by heat, by the action of which, indeed, it is reduced from its oxide to a metallic state. But it has been long observed that molten silver, when cooled suddenly, does not preserve the horizontality which it has in its melted state, but rushes up into cones and miniature Alps with an almost volcanic power, indeed with such force that the metal is frequently cast in fragments to a considerable distance. But if silver be cooled below the surface of water, large quantities of oxygen gas may be collected, the sudden evolution of which it is that raises the silver so violently above its level. Now it is a circumstance of curious interest in the chemical history of the metals, that molten silver should absorb and hold in combination (?) so large a volume of oxygen without becoming an oxide.

We are glad to find that this paradox, along with some other irregular phenomena, have led practical chemists to treat as less chimerical an hypothesis often broached, and which we have long since advocated, that doubts the simple nature of the metals. If analogy ever indicated any discovery, it indicates that the metals, although at present *chemical*, are not true elements.

On Friday, 4th February, Mr. Brande will explain his views of the nature of the *vegeto-alkalies*, to which he will subjoin some observations on *alkalies* in general.

disparagement of either, but rather to the glory of both, for by mutual reflection each will glow the brighter. If the animating principle of Davy's mind was a powerful imagination, generalizing phenomena, and casting them into new combinations, so may the striking characteristic of Wollaston's genius be said to have been an almost superhuman perception of minute detail. Davy was ever imagining something greater than he knew; Wollaston always knew something more than he acknowledged:—in Wollaston, the predominant principle was to avoid error; in Davy, it was the desire to discover truth. The tendency of Davy, on all occasions, was to raise probabilities into facts; while Wollaston as continually made them subservient to the expression of doubt.

Wollaston was deficient in imagination, and under no circumstances could he have become a poet; nor was it to be expected that his investigations should have led him to any of those comprehensive generalizations which create new systems of philosophy. He well knew the compass of his powers, and he pursued the only method by which they could be rendered available in advancing knowledge. He was a giant in strength, but it was the strength of Antæus, mighty only on the earth. The extreme caution and reserve of his manner were inseparably connected with the habits of his mind; they pervaded every part of his character; in his amusements and in his scientific experiments, he displayed the same nice and punctilious observation—whether he was angling for trout, or testing for elements, he alike relied for success upon his subtle discrimination of minute circumstances.

By comparing the writings as well as the discoveries of these two great philosophers, we shall readily perceive the intellectual distinctions I have endeavoured to establish. 'From their fruits shall ye know them.' The discoveries of Davy were the results of extensive views and new analogies, those of Wollaston were derived from a more exact examination of minute and, to ordinary observers, scarcely appreciable differences. This is happily illustrated by a comparison of the means by which each discovered new metals. The alkaline bases were the products of a com-

ANECDOTES FROM PARIS'S LIFE OF DAVY.

Davy and Wollaston compared as Philosophers.

IN contrasting the genius of Wollaston with that of Davy, let me not be supposed to invite a comparison to the

prehensive investigation, which had developed a new order of principles; the detection of palladium and rhodium among the ores of platinum, was the reward of delicate manipulation, and microscopic scrutiny. As chemical operators, I have already pointed out their striking peculiarities, and they will be found to be in strict keeping with the other features of their respective characters. I might extend the parallel farther; but Dr. Henry, in the eleventh edition of his system of Chemistry, has delineated the intellectual portraits of these two great philosophers with so masterly a hand, that, by quoting the passage, all farther observation will be rendered unnecessary*.

Davy's Voltaic Battery more powerful than the Artillery of Britain.

Let the reader only recal to his recollection the bitter animosity which France and England mutually entertained towards each other in the year 1807, and he will be able to form some idea of the astounding impression which the Bakerian Lecture must have produced on the Savans of Paris, when, in despite of national prejudice and national vanity, it was crowned by the Institute of France with the prize of the First Consul! Thus did the Voltaic battery, in the hands of the English chemist, achieve what all the artillery of Britain could never have produced—a spontaneous and willing homage to British superiority!—But let not this observation convey the slightest idea of disrespect, or be supposed to encourage any feeling to the disparagement of the chemists of France; on the contrary, it is even a question not readily answered, to which party the triumph fairly belongs,—to him who won the laurel crown, or to those who so nobly placed it on his brow? They have set an example to future ages, which may as materially advance the progress of science, as the researches which called it forth:—they have shewn, to adopt the language of an eloquent writer, that ‘the commonwealth of science is of no party, and of no nation; that it is a pure republic, and always at peace. Its shades are disturbed neither by domestic malice nor foreign levy; they resound not with the cries of faction or of public animosity. Falsehood is the only ene-

my their inhabitants denounce; truth, and her minister reason, the only leaders they follow.’

Effects of haste in increasing and diminishing Davy's Corpulence.

Such was his great celebrity at this period of his career, that persons of the highest rank contended for the honour of his company at dinner, and he did not possess sufficient resolution to resist the gratification thus afforded, although it generally happened that his pursuits in the laboratory were not suspended until the appointed dinner-hour had passed. On his return in the evening, he resumed his chemical labours, and commonly continued them till three or four o'clock in the morning; and yet the servants of the establishment not unfrequently found that he had risen before them. The greatest of all his wants was time, and the expedients by which he economised it often placed him in very ridiculous positions, and gave rise to habits of the most eccentric description: driven to an extremity, he would in his haste put on fresh linen, without removing that which was underneath; and, singular as the fact may appear, he has been known, after the fashion of the grave-digger in Hamlet, to wear no less than five shirts, and as many pair of stockings, at the same time. Exclamations of surprise very frequently escaped from his friends at the rapid manner in which he increased and declined in corpulence.

Davy's Passion for Angling, illustrating the peculiarities both of his Mind and his Attire.

Hitherto his passion for angling has only been noticed in connexion with his conversation and letters; I shall now present to the reader a sketch of the philosopher in his fishing costume. His whole suit consisted of green cloth; the coat having sundry pockets for holding the necessary tackle: his boots were made of caoutchouc, and, for the convenience of wading through the water, reached above the knees. His hat, originally intended for a coal-heaver, had been purchased from the manufacturer in its raw state, and dyed green by some pigment of his own composition; it was, moreover, studded with every variety of artificial fly which he could require for his diversion. Thus equipped,

* The passage alluded to was published in the Gazette, vol. . . p. .

he thought, from the colour of his dress, that he was more likely to elude the observation of the fish. He looked not like an inhabitant of the earth, and yet was on't;—nor can I find any object in the regions of invention with which I could justly compare him, except perhaps with one of those grotesque personages who, in the Fæerie of the Critic, attend Father Thames on the stage, as his two banks.

I shall take this opportunity of stating, that his shooting attire was equally whimsical: if, as an angler, he adopted a dress for concealing his person, as a sportsman in woods and plantations it was his object to devise means for exposing it; for he always entertained a singular dread lest he might be accidentally shot upon these occasions. When upon a visit to Mr. Dillwyn of Swansea, he accompanied his friend on a shooting excursion, in a broad-brimmed hat, the whole of which, with the exception of the brim, was covered with scarlet cloth.

Notwithstanding, however, the refinements which he displayed in his dress, and the scrupulous attention with which he observed all the minute details of the art; if the truth must be told, he was not more successful than his brother anglers; and here again the temperament of Wollaston presented a characteristic contrast to that of Davy: the former evinced the same patience and reserve—the same cautious observation and unwearied vigilance in this pursuit, as so eminently distinguished his chemical labours; the temperament of the latter was far too mercurial; the fish never seized the fly with sufficient avidity to fulfil his expectations, or to support that degree of excitement which was essential to his happiness, and he became either listless or angry, and consequently careless and unsuccessful."

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

LONDON HOSPITAL.

CASE 1.—*Deep-seated Tumor of the Neck— Extirpation—Recovery.*

J. BRUDENELL, aged 31, a short, stout, healthy-looking countryman, admitted into the hospital for a tumor on the left side of the neck and face. He stated that it commenced four years since, by the formation of two

knobs under the ear, which in progress of time joined each other, and thus had gradually and slowly grown larger, without giving any inconvenience until six months before his admission. At this period it became painful, and grew larger rapidly, in consequence of which he became a patient of the Cambridge Hospital, and, subsequently, of a gentleman of Huntingdon, under whose direction he had used iodine, externally and internally, without effect.

The tumor was, on admission, of considerable size, with an irregular surface, and sharp shooting pains extending through it. It occupied the side of the neck, side of the face, and lower part of the ear, its limits being the mastoid process behind, the foramen mentale in front, the thyroid cartilage below, which had been pushed a little out of its place towards the right side; it had embraced the angle of the jaw, and had proceeded between the ramus and ear to the zygoma, which it had partly obscured. On examination by the mouth, there was not found any extension of the tumor internally; it, however, lay embedded in such a manner behind the jaw, as to prevent the patient from opening his mouth; it also produced inconvenience in swallowing. Its surface in front was soft and elastic, behind more solid, and apparently lobular, while the whole was moveable in a slight degree.

The patient was desirous of its removal by operation, provided that it should be thought incurable by other means. This question having been disposed of, the operation was determined on; some delay, however, took place before its performance, in consequence of the patient's health becoming deranged.

Wednesday, June 22d.—The operation was undertaken by Mr. Luke. He was seated on a chair with his head inclining over a table. An elliptical incision was extended through the skin, from the lower part of the ear over the angle of the jaw to the front of the tumor: another was extended between the same extremes, encompassing the lower part. The skin was next reflected, so as to expose and set free that part of the tumor lying against the thyroid cartilage. The fingers of the left hand were then passed under it, and a careful dissection made close upon them, while the tumor was drawn out. In dissecting it upwards, a portion of the sterno-mastoid muscle, which lay over its posterior and inferior surface, was cut away. In ascending, the dissection became deeper, and considerable caution was necessary in pursuing the tumor between the ear and jaw. Up to this period the hæmorrhage had not been great: in separating the last portions, however, a large vessel was divided, and the bleeding became profuse, until a few hasty cuts severed the mass, and allowed pressure to be made with the finger by Mr. Scott. A

ligature was speedily applied to this, as well as other vessels, amounting in all to about ten. The wound was closed, and the patient taken to bed in a faint state, and watched, in anticipation of a return of bleeding, after his recovery from syncope. The operation exposed a surface of very considerable extent, in the bottom of which was seen the carotid arteries beating from below their division, for three inches upwards, inclosed within their bared sheath, while the digastric was seen crossing them to the exposed os hyoides. The pharynx was also exposed, and seen acting upon its contents, in the attempt to swallow some wine.

When laid in bed, xl. drops Træ. opii were given in some wine. In about an hour he had recovered from the faintness, and bleeding returned, when 20 vessels were tied, the wound closed, pressure made, and cold lotion applied over it. It was found that he had lost all power of motion over the left side of the face, which was distorted and drawn to the right; the feeling of the left, however, was not in the least impaired.

Examination of Tumor.—Its surface irregular and uneven, accommodating itself to the hollows in which it had been situated. An indentation on its centre marked the place which had received the angle of the jaw: from this it had proceeded for about equal distances towards the chin on the one hand, and towards the zygoma on the other. Upon the front part lay the submaxillary gland, with a section of the facial artery removed with it. With the zygomatic portion the parotid was connected, and removed. A part of the gland below was diseased, and mixed up with the tumor. The upper part was healthy, and invested by a dense cellular capsule, uniting it to the tumor. With this about an inch of the branches of the pes anserinus, and a small portion of the trunk of the seventh nerve, as well as a portion of the temporal artery, had been removed. The whole gland (with the exception of that portion lying upon the masseter) was excised. The tumor itself was a firm, white, and fibrous structure generally, but in front it was soft, elastic, and, on making a section, almost gelatinous; the whole was invested by a firm capsule.

23d.—Slept a little during the night, is now tranquil, and the pulse good: ordered beef-tea and Træ. opii gtt. xxx. at night.

24th.—Skin hot and dry, tongue furred, thirst, pulse quick and rather hard; slept pretty well, but complains of soreness of the throat when he swallows: the wound itself easy.

25th.—Tongue more furred; in other respects much as yesterday. Bowels not relieved since the operation. Ordered a dose of house-medicine, composed of senna and salts. The wound was to-day opened, and dressed. The skin had united below the

angle of the jaw: behind the ramus it had separated to a distance of half an inch, leaving a deep hollow behind the edges. There was not much inflammation, and the wound generally looked well.

26th.—Bowels freely opened, tongue cleaner, and fever less, soreness of throat diminished; appears reduced in strength; wound again dressed; suppuration established, and the surface looking favourable.

30th.—Most of the ligatures have been separated; he gains strength, and gets up daily.

July 16th.—Wound healed. To-day he leaves the Hospital. He has no power over the left muscles of the face. The eyelid droops, and the mouth is distorted. When about to sleep, he is unable to voluntarily close the eye; it however closes gradually without effort, and produces no inconvenience. He is free from pain, and masticulation and deglutition are performed as well as they ever were. He is in good health, and has continued so up to the present time.

CASE II. — *Paralysis — Acupuncture — Benefit.*

William Noman, æt. 40, a sailor, of rather robust appearance, states, that about eight months ago, when returning from Jamaica, he, as well as many others of the crew, were attacked with cholera morbus, of which they all recovered. They were afterwards attacked with typhus, for which mercury was given so as to produce salivation: he and some others of the crew caught cold whilst under the influence of the mercury, and lost the use of their arms and legs. He states that the power of motion of the limbs was destroyed, and that of sensation partially so. The use of the legs he recovered, however, spontaneously, and in July was admitted into the London Hospital, under the care of Dr. Gordon. At the time of his admission the power of motion in both his arms was almost entirely destroyed, and they hung dangling at his sides, his fingers being flexed on the palms of his hands. The muscles of the upper extremities were much wasted, and in a marked degree the adductor muscles of his thumbs: he says that they felt numbed and cold, and were of a livid colour. He had slight pains in the head, attended with drowsiness; and the bowels were constipated; the bowels were relieved by purgative medicines, and he soon recovered his general health. Blisters were frequently applied to the arms, but without producing much benefit.

Soon after his admission he came under the care of Dr. Macbraire, who ordered the flexor muscles of the arms to be acupunctured. The needles were introduced in four different places, and allowed to remain several minutes, and for the two or three

following days the number of the needles, and the space of time during which they were allowed to remain, was increased: he then was able to raise the arms nearly in a horizontal direction with the shoulders, and stated that he had acquired considerable power in lifting and carrying objects. Under the same treatment he continued to improve, and could with ease raise his hands to his head; the volume of the muscles had also increased, but the fingers continued in a state of flexion.

October 4th.—To-day he has appeared as an out-patient, and has been ordered to apply blisters to the back of the hands.

Calomel c. Jalap. ℥j.
 Alternis Auroris.

January 11th.—Since the last report, he has attended once a week, and after the blistered surfaces had healed, he was ordered to have the hands and arms rubbed with the linimentum ammoniæ fortius, but without receiving much benefit. The needles have been introduced again to day.

14th.—Says that he has more use of the fingers to-day. General health very good.

Omittatur Cal. c. Jalap.
 Pil. Cathart. p. r. n.

17th.—Has had diarrhœa for the last two days, which he attributes to cold. Acupuncture to be continued.

Mist. Cretæ Anod. Post. sing. deject.—
 Liquids.

21st.—Diarrhœa has ceased. Three needles were introduced on the 17th, and allowed to remain in the arm for some time: he can now extend his fingers better, and says that he is gaining strength in his hands and wrists.

25th.—Continues to recover the use of his fingers, the needles being introduced every second day.

CASE III.—*Aseites—Death—Post-mortem Examination.*

Henry Plummer, æt 35, a sailor, was admitted into the London Hospital on the 7th November.

He states that about eleven months back he observed that his legs and thighs began to swell, and that about three months afterwards his abdomen became tumid. These swellings gradually subsided, but have again appeared within these five or six weeks, and have increased rapidly during the last few days, attended at times with pain at the lower part of the abdomen, which is at present very tense, from the accumulation of fluid. He attributes his illness to having caught cold. He now complains of being unable to lie down, of dyspnœa attended with cough, of coldness of the extremities, and of loss of appetite. His face is sallow; there is much thirst; has passed

about six ounces of urine within the last twenty-four hours. B. confined.

Pulv. Julap. Comp. ʒi.
 Alternis Auroris.

8th.—Continues much the same; abdomen more distended.

Cont. Med.
 Paracentesis Abdominis.

13th.—The paracentesis was performed on the 9th with some relief. The dyspnœa has increased, the countenance is much collapsed; there is frequent vomiting of a dark substance, resembling coffee grounds.

Pulse irregular, 87, and small.
 15th.—He died at 5 A.M.

Sectio Cadaveris.—Thorax: A quantity of serous fluid was formed in the left side, and there were many firm adhesions between the upper margin of the right lung and the pleura costalis. The left ventricle of the heart was a little hypertrophied.

Abdomen: There were found in the abdomen about three wash-hand basons full of sero-purulent matter. The whole peritoneum was much thickened, and presented a granular appearance. The omentum was of a red colour, much thickened, and in form similar to the pancreas, and adhered to the abdominal parietes. The transverse colon was so firmly adherent to the stomach, that they could not be easily separated. The liver was enlarged, and adhered to the peritoneal lining of the abdominal muscles.

The small intestines were glued together, and healthy in their mucous coat.

QUARANTINE DISCUSSION.

IN our number for November the 20th, we stated that a communication on the subject of the Quarantine had been sent to us, which we had declined to publish. We have just received from the author of the paper in question a remonstrance, which we owe it alike to him and to ourselves to notice. We find that the letter was recalled through the same channel by which it had been transmitted, without waiting for, and consequently uninfluenced by, the Editorial decision. What led us into error is unimportant to the reader; but having been so, we think it but just to our correspondent, under these circumstances, to state that our observations were inappropriate.

DR. ELLIOTSON'S LECTURE has been unavoidably omitted this week, from the articles in the first part of the second sheet having run longer than was expected, and thus left no room for it.

MR. LIZARS', and various other papers, next week—with regard to which "press of matter" must be our apology for the delay.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

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SATURDAY, FEBRUARY 12, 1831.

LECTURES

ON

MEDICAL JURISPRUDENCE,

Delivered in the University of London,

By PROFESSOR AMOS.

LECTURE II.

ON MEDICAL EVIDENCE.

The Law regarding Confessions—Advice to Medical Men—Coroners' Inquests—Extreme importance of Medical Evidence given before a Coroner—Statement of Medical Opinions in Courts of Justice—Simple and popular language recommended.

GENTLEMEN,—In my last lecture I had occasion to observe, that it very frequently happened to medical men to be among the first persons present after the commission of any violent injury, and therefore I thought it very necessary that they should be acquainted with the law respecting dying declarations; and I thought it would be useful to explain to you for what purpose statements made in the presence of prisoners were receivable in evidence, which might appear puzzling to persons who knew that, in general, hearsay evidence is not admitted in an English court of justice. I illustrated this somewhat refined doctrine of law by the example of Mr. Ashley Cooper's evidence, in the trial of Patch, relative to a remarkable conversation in Patch's presence. With the same view of putting the medical man in possession of all legal points applicable to his situation when he is called in upon the commission of a violent injury, and is placed in contact, as it were, both with the inflictor of the injury and the sufferer, I shall advert shortly to the law regarding confessions.

Within my own experience I can say that confessions are often made to medical men. Many writers upon jurisprudence have been of opinion, that no man ought to be convicted upon his own confession. The English law however says, that a prisoner may be convicted upon his own confession alone. Still the circumstances under which a confession is made, ought to be watched with great strictness by a judge and jury; for our legal annals supply several instances where persons have been induced to make confessions of murders, which, it was proved afterwards, they never committed; and our state trials record numerous instances in which persons have confessed that they have been guilty of witchcraft, and have acknowledged to sailing through the air upon a broomstick, assuming the form of aged cats and the like; nay, have been executed upon such confessions; for gentlemen, perhaps, do not know that it is only since the reign of Geo. II. that witchcraft has ceased to be a capital offence in this country. As a check to the admission of confessions which may have been improperly obtained, I should state the practice of criminal courts (as not to be found in any book) that no counsel for a prosecution ever asks a witness about a confession made to him, without prefacing his question in some such manner as this:—"Did you say any thing to induce the prisoner to confess? Did you say it would be better for him if he did, or worse for him if he did not, or any thing of the sort?" The general rule is, that if any promise or threat has been used to obtain the confession, it cannot be heard. On this rule, however, has been engrafted a qualification, namely, that a confession is not invalidated by the circumstance of a promise or threat having been made by an unauthorized individual: I have heard judges say, that a promise or threat goes for nothing unless made by a *magistrate*, a *constable*, or the *prosecutor*; I state, therefore, that it is somewhat a doubtful point of law whether a confession would be invalidated in consequence of a promise or threat made

by a surgeon, who, when he is called in upon the occasion, is supposed, perhaps, to be clothed with a sort of official capacity. The following case of a confession to a surgeon is reported; and perhaps you will collect from it that the confession would have been rendered nugatory, if the promise proved had been made by the surgeon himself.

"*REX V. ELIZABETH GIBBONS.*"

The prisoner was indicted for the murder of her bastard child. Mr. Cozens, a surgeon, was called to prove certain confessions made by the prisoner to him. The witness objected to giving such evidence, on the ground that at the time of the statement he was attending the prisoner in the capacity of a surgeon.

Mr. Justice Park.—That is no sufficient reason to prevent a disclosure for the purposes of justice.

The witness also stated that he had held out no threat or promise to induce her to confess; but a woman who was present said, that she had told the prisoner she had better tell all; and then the prisoner made certain confessions to the witness.

Mr. Campbell objected, that, as the confession was made after an inducement held out, it could not be received in evidence.

Mr. Justice Park, after consulting with *Baron Hullock*, laid down, that as no inducement had been held out by Mr. Cozens, to whom the confession was made; and the only inducement had been held out (as was alleged) by a person having no sort of authority; it must be presumed that the confession to Mr. Cozens was a free and voluntary confession. If the promise had been held out by any person having any office or authority, as the prosecutor, constable, &c. the case would be different; but here some person, having no authority of any sort, officiously says, you had better confess. No confession follows; but some time afterwards, to another person (the witness), the prisoner, without any inducement held out, confesses. They (the judges) had not the least doubt that the present evidence was admissible.

It was accordingly admitted. The prisoner, however, it may be added, was acquitted on other grounds*."

Whatever may be the law as to threats or promises held out by a surgeon, I would advise all medical men, well knowing as I do the feelings of courts of justice upon such subjects, never to say a word to a suspected person with a view to produce a confession. Should, however, any confession be made in your presence, I would recommend you to take the earliest opportunity of committing

it to writing; as, also, to note any means that may have been practised by others in order to obtain the confession.

We will now leave the scene of murder, or other violence to which the medical man may have been called as an early witness, and go to the court of the coroner, which, in cases of homicide, is generally the next place to which the medical man will be summoned. The coroner is sure to summon the medical man first called in after a murder or other homicide committed, and where no medical man has been so called in, the coroner will frequently summon a surgeon to inform the judgment of the jury. If the coroner's summons is disobeyed, he issues a warrant to apprehend and bring the witness before him, and he may commit the witness if he perversely refuses to give evidence. It may be useful to know, that according to the doctrine lately held by the Court of King's Bench, the court of the coroner is not necessarily an open court, at the proceedings of which the public have a right to be present; but that the coroner may open the court to the public or not, at his discretion.

The coroner's jury, which always consists of twelve at the least, is sworn "super visum corporis," as it is said. Unless the body is present when the jury are sworn, the inquest is void. The coroner is authorized to order the disinterment of a body, in order that his inquest may sit upon it. In *Donellan's*, and several cases of celebrity, the body has been taken up, by order of the coroner, some time after it has been buried.

But the Court of King's Bench, in one case, would not recognize an inquest, which sat upon a skull, when the person, to whom it was supposed to have belonged, had been dead five years.

I need not observe, that in case coronerships should in future be held by medical as well as by legal men, how important the subject of medico-legal evidence must be as a qualification for the office. But this is not my particular object in drawing your attention to the subject of the coroner's inquest. It is more general; affecting the duties, interests, and reputation of all medical men, and not merely aspirants after coronerships.

Too often medical men go before the coroner without having reflected sufficiently on the situation in which they are placing themselves; and they find themselves in a room, in some pot-house, perhaps, in company with persons of a lower rank in life than themselves, and they often do not bestow sufficient reflection upon the answers which they return. Now let me address myself first to the consciences of medical persons, and remind them, that it may be the consequence of their negligent evidence before the coroner that a guilty man is never brought to trial, and on the other hand that an innocent man is taken away to prison, and confined per-

* *Carrington and Payne. Oxford Circuit, 4 Geo. IV.*

haps eight months before he can be tried; and moreover, that if they die before the trial of the person accused of murder, or are sick and unable to attend the trial, their depositions, though taken in the *absence* of the prisoner, and therefore not sifted and explained by cross-examination, will be evidence against the prisoner—a strange anomaly in the law, and one deserving all reprehension. Hence it follows that a conscientious man ought to be more guarded, if possible, in giving evidence before a coroner than before a judge.

As an example of the use of cross-examination in brushing up the memory of a medical man, I may mention that at the trial of W. Richardson, at Chelmsford, in 1822, indicted for poisoning two women with copperas, Dr. Baddeley, a physician, gave it as his opinion that two drachms of copperas would produce death; but upon cross-examination he admitted that he had confounded copperas and verdegris.

But let me suppose that the pomp and circumstance of an assize court is with some persons an indispensable stimulus to the proper degree of consideration necessary for giving judicious medical evidence; let me warn those persons, that whilst they are giving their evidence in the witness-box, the judge is looking over their deposition before the coroner, (which the coroner is bound to furnish the judge with,) and is comparing it with what they are deposing before him. The judge sometimes hands these depositions to the counsel for the prisoner, and at all events what the medical man has deposed to before the coroner, gets known. How bad then, on such occasions, is the look of a medical man giving upon oath contradictory testimony, or, which is very frequently the case, giving testimony which, by additions and qualifications, very materially varies what he has sworn to before. And it naturally occurs to every body, supposing the medical man to be fair and honest, how grossly would justice have been perverted, if, in case of his death or sickness, his deposition before the coroner only had been read.

I am not putting, gentlemen, imaginary cases, but what I have repeatedly witnessed myself. To satisfy you further, and to inculcate more strongly my recommendations, let me take an example of what I have been saying, from the remarkable trial of Donnellan.

In the case of Donnellan, for poisoning Sir Theodosius Boughton, Dr. Rattray, of Coventry, deposed to his opinion, that Sir Theodosius was poisoned with laurel water; and Dr. Rattray was present at the opening of the body.

I will now read some parts of his cross-examination.

Dr. RATTRAY cross-examined by Mr. NEWNHAM.

Q. Did you or did you not concur with

Mr. Wilmer, as to the appearances of the body?—A. In general we did. Q. You set your name to that examination?—A. I did not set my name to any thing but my own examination. Q. Wherein the appearances are particularly described?—A. They are not particularly described; there is something said about the stomach and bowels. Q. For what purpose, then, did you attend there?—A. *I did not know that it was necessary, before a Coroner's jury, to enter into the particulars. I was quite a novice in the business.* Q. Do you mean a novice in the mode of dissection?—A. No; *in the business before a Coroner.* Q. Did the account you set your name to contain a true description of the appearances that met your eye upon the occasion?—A. So far as they went it did. Q. Did you ever hear or know of any poison whatever occasioning any immediate external appearances on the human body?—A. No; no immediate external appearances in the case of vegetable poisons, except what I have heard; but they have not fallen under my own knowledge. Q. So far for the external appearance. Now I shall be glad to know whether all the appearances you speak of in the face, the protuberance of the tongue, and the lips being swelled and retracted—whether these are not all signs of putrefaction?—A. *I really don't know what they are.* Q. I do not mean to give you any offence, but I beg leave to ask whether you have been much used to anatomical dissection?—A. I have been as far as persons not particularly intended for anatomical pursuits; I am not a professor of anatomy. Q. Did you ever attend the dissection of a human body that was poisoned, or suspected to have been poisoned?—A. Never. Q. From the external appearances of the different parts of the body you draw no kind of conclusion or inference, and form no opinion?—A. No; I don't form any strong opinion from them. Q. How were the appearances when the cavity of the abdomen was opened?—A. I have described them in general. Q. Not being an anatomical man, it has escaped my memory; will you please to repeat it?—A. I believe I did not before mention the omentum, or caul, that was suffused with blood of a brownish red; the stomach and bowels in general appeared red, which is vulgarly called an inflammation. Q. Might not that be owing to a transfusion of blood?—*Dr. Rattray.* From what cause?—*Mr. Newnham.* From putrefaction.—*Dr. R.* Do you, by a transfusion of the blood, mean the passage of the blood from the arteries into the veins?—*Mr. N.* Yes. *Dr. R.* I cannot think it could arise from putrefaction. Q. That is your opinion?—A. It is. Q. Did you look at the stomach?—A. Yes. Q. As Sir Theodosius B. is represented to have died in a few minutes after taking this medicine, did you with correctness and attention examine the

stomach?—A. The contents of the stomach were about a spoonful and a half, or a couple of ounces, of a slimy reddish liquor, which I rubbed between my finger and thumb, and it contained no gritty substance that I could perceive. Q. Is it not usual to find some such quantity of liquor in the stomach?—A. The stomach, after death, must contain something more or less, according to different circumstances. Q. You said the stomach, and the orifice of it, and the small arch of it, bore the appearance of inflammation; pray is not inflammation, and appearance of inflammation, much the same thing?—A. All that I have to say upon the present business is, that I perhaps don't know the cause of inflammation; but there is an appearance of inflammation upon the stomach and bowels, owing to an injection of blood into the venous system; the veins, being full of blood, put on a red appearance. Q. If you will not take upon you to say what is the cause, what are the signs of inflammation?—A. An appearance of redness, sometimes, but not always, attended with pain, and sometimes throbbing. Q. Did you pursue your search through the bowels?—A. No, I can't say I did; nor did I think it in my power. Q. How far did you pursue your search in the stomach?—A. We examined the contents of the stomach; we took the stomach out, but, in taking it out, a great part of the contents issued out of the bowels next to it, and the smell was so offensive I did not choose to enter into that matter. Q. Whether a pursuit or inquiry, from an inspection through the bowels, was not as likely to have led to a discovery of the cause of the death as any other part of the body which you did examine?—A. *I do not believe a pursuit through the whole extent of the bowels could have led to any discovery in these circumstances.* Q. Are not the bowels the seat of poison?—A. When it passes in there, no doubt it affects the bowels. Q. Then why did you not examine into the contents of the bowels?—A. *I did not think it in the power of any one to examine into the contents of the bowels, their contents being so strong and disagreeable.* Q. *Whether you do not form your judgment upon the appearances?*—A. *Not altogether; they corroborate my opinion upon the effect of the draught.* Q. Did you or did you not know the contents of the draught Mr. Powell had prepared, when you were examined before the coroner?—A. Yes; I did. Q. And you knew from the account given you how long Sir T. B. lived after he took the draught?—A. I took my information from Lady Boughton. Q. Then, whether many reasons have not occurred subsequent to that time considerably to induce you to form your judgment that he died of arsenic?—A. Not subsequent to that time; at that time I did think he died

of arsenic; but *I am now clear that I was then mistaken,* &c.*

We will now leave the coroner's inquest, and dwell, for a short time, upon the only species of medical testimony—I mean such testimony as generally falls in the way of medical men to give, and which we have not hitherto examined, viz. "medical opinion."

A medical man who has not seen a patient, may, after hearing the evidence of others, be called to prove, on his oath, the general effect of the disease described by them, and its probable consequences in the particular case. Thus, in prosecutions for murder, medical men have been allowed to state their opinions, whether the wounds described by witnesses were likely to be the cause of death; or, in another description of cases, whether such and such appearances are symptoms of insanity? So a medical man may be asked his opinion upon many hypothetical points, not proved in evidence, but suggested by the ingenuity of counsel: as, for example, where the strangulation of a new-born infant is charged, whether the swollen and red appearance of the head might not have been occasioned by its being born some time before the body; or been produced by the accidental ligation of the navel-string?

It is part of the business of a course of lectures upon Medical Jurisprudence, to inform the medical student, when you are summoned upon a trial of this or that description, besides any *facts* which you may have witnessed, upon what points is the counsel on one or the other side likely to call for your opinion?

You will say, it is easy enough to give an opinion. I may answer, that lawyers have the advantage of medical men in this—that the opinions of medical men are submitted to a much more severe ordeal. Having given your opinion, you will be asked, what are the grounds of your opinion? If you say, *your own experience*, the extent of this will be narrowly investigated. If you say, from analogical experiments, which you have made upon the lower animals (as it is very frequent that horses, and dogs and cats, and other animals, are drowned, or poisoned, with a view to throw light on the manner of death of a person supposed to have been murdered), you will be required to give a satisfactory answer to the questions: for example, whether any certain analogy is to be drawn from the effects of any given species of poison upon an animal of the brute creation, to that which it may have upon a human subject; and whether particular substances which would

* Paris and Fonblanque, Med. Jur. vol. iii. p. 254.

kill animals instantaneously, would have no noxious effect, or at least a much less immediate effect, upon the human subject?

I will give some extracts of examinations, where analogy has been stated as the ground of medical opinion.

[Here the Professor read some passages from the direct and cross-examination of Dr. Rattray—which may be referred to as above—and then the following passage from the evidence of John Hunter on the same memorable trial.]

MR. JOHN HUNTER examined by MR. NEWNHAM.

“ Q. Is any certain analogy to be drawn from the effects of any species of poison upon an animal of the brute creation, to that which it may have upon the human subject?—A. As far as my experience goes, which is not a very confined one, because I have poisoned some thousands of animals, they are very nearly the same. Opium, for instance, will poison a dog as well as a man; arsenic will have very nearly the same effect upon a dog as it would have, I take it for granted, upon a man; I know something of the effects of them, and I believe their operations will be nearly similar. Q. Are there not many things that kill animals almost instantaneously, that will have no detrimental or noxious effect upon a human subject; spirits, for instance, occur to me?—A. I apprehend a great deal depends upon the mode of experiment. No man is fit to make one but those who have made many, and paid considerable attention to all the circumstances that relate to experiments. It is a common experiment, which, I believe, seldom fails, and it is in the mouth of every body, that a little brandy will kill a cat. I have made the experiment, and have killed several cats; but it is a false experiment. In all those cases where it kills the cat, it kills her by getting into her lungs, not into her stomach; because, if you convey the same quantity of brandy, or three times as much, into the stomach, in such a way as that the lungs shall not be affected, the cat will not die. Now in those experiments that are made by forcing an animal to drink, there are two operations going on: one is a refusing the liquor, by the animal kicking and working with its throat to refuse it; the other is a forcing the liquor upon the animal; and there are very few operations of that kind but some of the liquor gets into the lungs. I have known it from experience. Q. If you had been called upon to dissect a body suspected to have died of poison, should you or not have thought it necessary to have pursued your search through the guts?—A. Certainly. Q. Do you not apprehend that you would have been more likely to receive information from them than from any other part of the frame?—A. *That is the track of the poison,*

and I should certainly have followed that track through.”*

Nay, more, you will not always be let off with stating your *own opinion* and giving some *ground* for it, but you will be expected to know something about the opinions of others; or at least you will appear very ignorant if you do not. And it may be observed, that perhaps lawyers, whose freedom of intellectual inquiry is fettered in the closest and most servile manner by authority, are apt to lay too great stress upon authority in medical matters. You must constantly, therefore, be expected to be taxed with such questions as these:—What are Hunter's opinions upon such or such a subject? Was Haller, was Dr. Mead of the opinion you are now giving?

I remember a medical man, at Lincoln, endeavouring to give the go-by to such questions, by slighting the information which was to be obtained from medical writers; answering, “that the writers of books would advance any thing.” Chief Justice Dallas severely reprimanded the witness, observing, that he would not sit in a court of justice and hear science reviled, and the recorded researches of the medical world represented by ignorant tongues as leading only to uncertainty.

It has been a great reproach to the medical profession, that, on the occasion of celebrated trials, the medical witnesses on the one side and the other have contradicted each other in such a point-blank manner in their opinions delivered upon oath.

Thus in the case of Donnal, tried at Exeter, in 1817, for poisoning his mother-in-law with arsenic, Dr. Edwards, for the prosecution, is asked—What is your opinion, from the appearance of the deceased on dissection, as to the cause of her death? From the appearance of the stomach and intestines, independently of the examination and analysis of their contents, I have no doubt that the death was produced by arsenic. And, in re-examination, you have stated your opinion that the death was not occasioned by cholera morbus, and have been asked several questions upon the nature of cholera: do you change your opinion?—I do not. When Dr. Adam Neale is called for the defence, he is asked—Did you hear distinctly the description Dr. Edwards gave of the appearance of the stomach after it was opened? To what should you, independently of other circumstances, have attributed that appearance?—To no cause but disease. What disease?—Cholera morbus. In this he is followed by two or three more doctors. Dr. Edwards spoke also as to the certainty of two tests he had employed—blue vitriol and lunar caustic; and

* Par. and Foulbl. M. J. vol. iii. p. 272.

that the circumstance of Mrs. Downal having eaten onions shortly before her death, could not have affected the tests. The doctors for the defence denied the sufficiency of the tests, and deposed that the tests would very probably be affected by the onions.

So, in Donellan's trial, the doctors for the prosecution were particularly asked as to their opinion upon the symptoms described by Lady Boughton, and which I read on the last occasion; and they say that they are of opinion, from the symptoms described, that the cause of the death was laurel water. Is the heaving of the stomach a circumstance which attends epilepsy, or apoplexy? It is not. Now, when John Hunter is called, he is asked—Are the symptoms that appeared after the medicine was given, such as necessarily to conclude that the person had taken poison?—Certainly not. If an apoplexy had come on, would not the symptoms have been nearly or somewhat similar?—Very much the same. You have heard of the froth issuing from Sir Theodosius's mouth, a minute or two before he died; is that peculiar to a man dying of poison?—No; I should rather suspect an apoplexy. You recollect the circumstance that was mentioned of a violent heaving of the stomach?—All that is the effect of the voluntary action being lost, and nothing going on but the involuntary.

Again, the doctors for the prosecution swore that it was their opinion, from the appearances of the body on dissection, that Sir Theodosius had been poisoned; and that those appearances could not arise from putrefaction. John Hunter said, that, in his judgment, the appearances were entirely the result of putrefaction, and that they did not afford the least suspicion that Sir Theodosius died of poison.

But the most remarkable of a multitude of instances of cross-swearing by doctors, with regard to medical opinion, was in the case of Cowper, afterwards a judge. He was tried for the murder of Mrs. Stout, a Quaker lady, whose body was found in a river near Hertford, during the time Cowper was attending the Hertford assizes as a counsel, and who had fallen in love with Cowper. She had also written some love-letters to another swain, signed "Your loving duck." The charge against Cowper was, that he had strangled the woman, and then had thrown her body into the river, in order to give a colour to the charge of suicide. At the time this happened, Cowper's father and brother were sitting members for Hertford, after a recent election, which had been strongly contested; and the irritation occasioned by it was still active. Accordingly a long list of tory doctors were summoned for the prosecution, and an equally long list of whig doctors for the defence. The contest was upon a point of medical

opinion with regard to bodies found *floating, without water in them*—how the deceased came by their death. Mrs. Stout was found at the top of the water the day after she was missing; but her body was not opened till six weeks afterwards, when no water was found in it.

[The contradictions of the medical witnesses in this case were very remarkable indeed. We may refer the reader to them in Gordon Smith's Analysis of Med. Ev. pp. 274, 275, 281, 283.]

I shall have occasion frequently, in the course of my lectures, to advert to the subject of the demeanor of medical witnesses. The hour will just allow of me, this evening, adverting to one piece of advice; which is, in the witness-box to drop as much as possible the language which is known only to scientific men, and to adopt that which is in popular use. If you have occasion to speak of a person fainting, do not say, as I have heard it said, that you found the patient in a state of *syncope*;—and you must not expect a court of justice to understand you if you talk of a person being *comatose*, or of the appearance of his stomach after death being *highly vascular*, or of your having discovered poisonous ingredients in his intestines by means of a *delicate* test. The judge and counsel are generally very shallow men of science, and it is a great advantage for them to raise a laugh at persons whom they would represent to be using hard names for common things. Veterinary surgeons are a great game for counsel; as I remember, in particular, a veterinary surgeon who, when cross-examined by Serjeant Vaughan, was so unfortunate as to make use of the term "suspensary ligament," which the serjeant interpreted "a hangman's noose." I should guard you also against the use of metaphorical expressions, of which I will give you an example.

In the examination of Mr. Tucker, in Donnell's case, the witness is asked, "Have you seen the prescription which Dr. Edwards wrote that night?—No, I have not; but I would wish to see it. (Here the prescription was shewn to the witness). Now supposing a person to have retchings and purgings for several hours, and that you found these attended with frequent and fluttering pulse, in that state of the illness what should you have prescribed?—*I should have prescribed diametrically opposite to the prescription of Dr. Edwards; I should consider that prescribed by Dr. Edwards, as adding weight to a porter's back.* Mr. Justice Abbott, (to the witness), don't speak metaphorically; you are speaking just now of a gentleman of experience and respectability; I don't wish you to conceal your opinion, but only to speak it in different language."

And considering that, when you are giving testimony in a witness-box, you are

discharging a most responsible duty upon your oaths, I should recommend you, even if you should meet with rude and unbecoming treatment from an advocate, that you should not vie with him in a dexterous use of what my Lord Bolingbroke calls the "flowers of Billingsgate." A short extract from a scene in the Oldham Inquest, will illustrate my meaning.

Mr. Simmons, a surgeon of Manchester, is undergoing a cross-examination by Mr. Harmer. "I think," says Mr. S. "I am more capable of forming a correct opinion on the subject than Mr. Cox." "The jury, sir," replies Mr. H. "will no doubt duly appreciate the value of that self-opinion." Mr. Ashworth.—Really, Mr. Coroner, I must interpose to protect the witness from this sort of attack. *Witness*.—Oh! Mr. Ashworth, let me go on, I will teach him surgery; I am anxious for a little more discussion; he is not the first lawyer I have taught surgery. Mr. Harmer.—Perhaps not; but notwithstanding the opinion you entertain of your own skill, I should be very sorry to be under your hands. *Witness*.—Oh! I'll teach you surgery, sir. As you have challenged me with a castigation from different medical opinions, I hope you will bring down Dr. Cline, Sir Everard Home, and the other leading members of the faculty. I shall be very happy to see them. Mr. A.—I will ask you, Mr. Coroner, whether the witness is to be attacked in this kind of way. *Witness*.—I am sorry you should interrupt the gentleman, Mr. Ashworth; I am anxious for a little more discussion with him. (Here much clamour ensued, and different gentlemen addressed the Coroner together.) *Witness*.—I want a little more discussion; don't interrupt the gentleman; I should like a little more discussion with him. Mr. H.—I beg you will hear Mr. Simmons; he says he wants a little more discussion. The Coroner.—I have exhausted all my patience," &c.

[Mr. Amos here concluded, by briefly observing, that he had now finished what he had to say on the subject of medical evidence; and that he should, in his subsequent lectures, discuss matters of a very different nature; that his object, in short, was to go over the same ground in law as his colleague, Dr. Thomson, is going over in physiology.]

ADDENDUM.—On the Inquiry whether Medical Men are privileged in a Court of Justice to refuse answering certain Questions.

[WITH a view to render the opening lecture of Professor Amos, on Medical Evidence*, as complete as possible, we will, in addition to the illustrations

given last week, now present our readers with one more—elucidatory of that very important topic touched upon by the learned gentleman at the beginning of his lecture, namely, *what questions a medical man in a court of justice may refuse to answer*. It will appear from the following extracts that medical persons have no privilege whatever not to disclose circumstances revealed to them professionally; and that the only communications privileged are those to counsel, solicitors, and attorneys, intrusted with those communications as such. A leading case on the subject is *Wilson v. Rastall*, 4 Ter. Rep. 759.]

Mr. CESAR HAWKINS examined by Mr. DUNNING.

Q. Mr. Hawkins, are you acquainted with the lady at the bar? and how long have you been so?—A. A great many years: I believe about thirty. Q. Are you acquainted with the present Lord Bristol: and how long have you been so?—A. I have had the honour of knowing the Earl of Bristol nearly as many years. Q. Do you know of any intercourse between my Lord B. and the lady at the bar?—A. Of an intercourse certainly: of acquaintance undoubtedly. Q. Do you know from the parties of any marriage between them?—Mr. Hawkins. I do not know how far any thing that has come before me in a confidential trust in my profession should be disclosed, consistent with my professional honour. (The question and answer were here repeated.) Mr. Dunning. I trust your lordships will see nothing in my question that can betray confidential trust, or dishonour to Mr. Hawkins in giving it. My question is simply, whether Mr. Hawkins knows from the parties of any marriage between them?—Lord High Steward. The question that was asked by the counsel at the bar, is, "Whether the witness knew, from any information of either of the two parties, that they were married?" The witness objects to it, whether he is to answer any questions that are inconsistent with his professional honour. Your lordships are to determine, whether the question put by the counsel at the bar shall be asked? Lord Mansfield. I suppose Mr. Hawkins means to demur to the question upon the ground that it came to his knowledge some way from his being employed as a surgeon for one or both of the parties; and I take for granted, if Mr. Hawkins understands that it is your lordships' opinion, that he has no privilege on that account to excuse himself from giving the answer, that then, under the authority of your lordships' judgment, he will submit to answer it. Therefore, to save your lordships the trouble of an adjournment, if no lord differs in opinion, but thinks that a surgeon

* Med. Gaz. p. 545, &c.

has no privilege to avoid giving evidence in a court of justice, but is bound by the law of the land to do it, (if any of your lordships think he has such a privilege, it will be a matter to be debated elsewhere, but) if all your lordships acquiesce, Mr. Hawkins will understand that it is your judgment and opinion, that a surgeon has *no privilege*, when it is a material question, in a civil or criminal cause, to know whether parties were married, or whether a child was born, to say that his introduction to the parties was in the course of his profession, and in that way he came to the knowledge of it. I take for granted, that if Mr. Hawkins understands that, it is a satisfaction to him and a clear justification to all the world. If a surgeon was *voluntarily* to reveal these secrets, to be sure he would be guilty of a breach of honour, and of great indiscretion; but to give that information in a court of justice which by the law of the land he is bound to do, will never be imputed to him as any indiscretion whatever.

The question was then put once more, and answered directly by Mr. Hawkins.

And *Mr. Justice Buller*, in giving judgment in the case of *Wilson v. Rastall*, above alluded to, thus proceeds:

“I take the distinction to be now well settled, that the privilege extends to those three enumerated cases (counsel, solicitor, and attorney) at all times; but that it is confined to these cases only. There are cases to which it is much to be lamented that the law of privilege is not extended; those in which medical persons are obliged to disclose the information which they acquire by attending in their professional characters. This point was very much considered in the *Duchess of Kingston's* case, where *Mr. Caesar Hawkins*, who had attended the *Duchess* as a medical person, made the objection himself, but was overruled, and compelled to give evidence against the prisoner*.

PURIFORM DEPOSITIONS.

Abstract of a Clinical Lecture lately delivered

By DR. GRAVES,

AT THE

MEATH HOSPITAL, DUBLIN.

On the Occurrence of Puriform Depositions in different Organs—in the Heart—the Uterus—the Brain—and the Larynx.

GENTLEMEN, — Within the last six

months, during which I have had the charge of the patients in the medical wards of this hospital, several cases have occurred in which puriform matter was found in various viscera, under circumstances rendering it probable that this matter was not the product of common suppurative inflammation in the part where it was found, but that, being formed in a distant part, it had been absorbed into the current of the circulation, and afterwards deposited from the blood. So much has been lately written on this subject, that it is unnecessary for me to do more than direct your attention to the points most worthy of your notice in the cases which we observed.

On opening the heart of a young man who died of phthisis, and whose lungs contained several tubercular abscesses, the right ventricle of the heart was apparently full of purulent matter: a more careful examination shewed that this matter did not occupy more than one half of the ventricular cavity, the remainder being filled with coagulated blood, partly blackish and resembling in consistence ordinary polypi, partly less coloured, broken down, and soft, and evidently of a composition intermediate between puriform matter and coagulated blood. As the internal surface and parietes of the ventricle were perfectly healthy, this purulent matter must undoubtedly have been separated from the blood within the cavity of the ventricle, after having previously circulated along with that fluid in the vascular system. As to the source whence this puriform matter was derived, it must evidently be referred to absorption from the pulmonary abscesses, and indeed no one can doubt that such an absorption may take place, who is aware how often pus has been actually detected in the lymphatics and veins of parts situated immediately around such an abscess. Had the matter been found within the substance of any viscus or tissue, this explanation would be liable to the objection that the formation of pus was the consequence of suppurative inflammation in the part where it occurred, but here this objection is totally inapplicable, and consequently to account for the phenomena we are forced to adopt the hypothesis of absorption from the abscesses, and subsequent deposition within the ventricle.

* See State Trials, trial of the *Duchess of Kingston* for bigamy, A.D. 1776, vol. xx. col. 572-576.

Such a deposition may take place during life, and in parts where there is no sanguineous effusion. Thus, in the fifth volume of the Dublin Hospital Reports, Dr. Stokes and I have described a case where puriform matter, absorbed from a psoas abscess, was deposited in such large quantities as to fill the womb with that peculiar caseous substance which results from serofulous pus, when its more fluid parts have disappeared. The lining membrane and substance of the womb were perfectly healthy.

These facts being established, we are, gentlemen, now prepared to account for the appearances we observed within the cranium of the Italian who lately died in this hospital. This young man was admitted labouring under a large and deep-seated abscess, situated over the external surface of the os ilium. This abscess was after considerable delay opened, and was completely cicatrized before the patient's death. About the time the incision into the suppurating cavity was made, various anomalous and unaccountable symptoms arose, and finally seemed to indicate the existence of some deep-rooted cerebral lesion. He at first complained of severe pain resembling neuralgia of the frontal nerve of the left side, and for which carbonate of iron was in vain exhibited. This pain soon became associated with cough, by which it was much aggravated, acceleration of pulse, constant vomiting without the peculiar symptoms of gastritis, restlessness, total want of sleep, dejection of spirits, headache, and a diminution in the vision of the right eye. All these symptoms persisting, his state became daily worse, and he was finally carried off after some slight convulsive motions, which left him in a state of insensibility for the few hours preceding his death. The post-mortem examination detected, besides hepatization of a considerable portion of the lungs, the following appearances within the cranium:—The substance of the cerebrum, its membranes and ventricles, were found in a healthy condition; but on opening the sinuses, the inferior longitudinal, the straight, and the left lateral sinuses, were found filled with puriform matter. In the first-mentioned sinus the pus was accompanied by a soft, friable, fibrinous coagulum, none of which

existed in any of the others. In the right lateral sinus there was found a mixture of blood and pus, the former, however, in much greater quantity than the latter. The parietes and lining membrane of these sinuses were everywhere healthy. Several of the small veins running along the sides of the cerebellum contained pus, and in some the half of the vein next its origin was filled with cream-like pus, whilst the other contained black fluid blood. The healthy and uninflamed appearance of the sinuses and veins, the admixture of blood with pus, and fibrinous coagulum intermediate between both, are circumstances which forcibly remind us of the purulent deposition we before observed in the heart, and consequently we can scarcely avoid referring the presence of pus in the blood to absorption from the previously existing abscess. But the deposition of purulent matter was not here limited to the vessels in which red blood actually circulates; but, as in the case where we found pus exuded into the cavity of the uterus, depositions of pus had taken place in great number over the surface of the cerebellum, particularly on the left side, and within its substance. These collections of purulent matter were very small in their size, varying from that of a common pea to four or five times that magnitude; and whether they were situated on the cerebellum or on its surface, they were not surrounded by any marks of previous inflammation, such as vascularity, induration, or softness. If we suppose these depositions, which, although so minute, were exceedingly numerous, to have commenced about the time the cerebral symptoms set in, the latter will admit a ready explanation, and the patient's death may be thus traced to the deposition of puriform matter originally derived from a distant but extensive abscess.

Another remarkable case, of somewhat a similar nature, you may remember excited much attention among the pupils last autumn. A middle-aged woman, of a strong constitution, was admitted into the fever ward, with symptoms of typhus. On inquiry we found that she had for many days been affected with severe phlegmonous erysipelas, occupying the upper portion of the sternum and lower part of the neck. These parts were of a purplish-red colour, and

of a boggy feel. As soon as possible free incisions were made, and vent given to a large quantity of matter. Notwithstanding, no relief was experienced, and the inflammation spreading also, appeared to extend more deeply among the parts at the bottom of the neck, and, finally, a croup-like respiration having supervened, an abscess was supposed by the consulting surgeon to be pressing on the trachea. A more accurate examination with the stethoscope convinced me, however, that the cause of the croup-like respiration was situated in the larynx. Soon after this poor woman's admission, my attention had been attracted by the appearance of several large vesicles containing puriform matter, generally surrounded by a little redness, but without any elevation or hardness, the absence of which makes me call them vesicles, not pustules. These vesicles, about twelve in number, occurred not only on the extremities but on the body, and were strikingly similar to those observed by Mr. Colles in his first paper on wounds received in dissection*. The croup-like breathing was caused by a great number of smaller, but otherwise similar vesicles, which occupied nearly the whole surface of the mucous membrane of the larynx. We must either attribute the origin of the vesicles to pus absorbed from the extensive suppuration of the phlegmonous erysipelas, or else we must consider them as owing to the action of a morbid poison, generated in consequence of that suppuration. Facts are not wanting to prove that local irritations, or rather local inflammations of an unhealthy nature, may infect the constitution, and produce cutaneous eruptions, quite independent of any foreign morbid poison introduced into the system. This however is, I believe, the first case in which such a cause has produced an eruption of these vesicles, which, by Dr. Duncan and Mr. Travers, are considered as the surest sign of a foreign morbid poison; and in this point of view I think, gentlemen, it is well worthy of observation.

REMARKS

ON THE

STAINS PRODUCED BY THE IMPROPER USE OF NITRATE OF SILVER IN SOME DISEASES OF THE EYE.

By R. T. HUNT,

Assistant-Surgeon to the Manchester Institution for Curing Diseases of the Eye.

OBSERVING in the Gazette of January 15th an extract from the Dublin Hospital Reports, relating to stains of the conjunctiva, caused by the application of nitrate of silver, and fearing the effect which the opinion of such high authorities as Dr. Jacob and Mr. Lawrence may produce in deterring surgeons who have not extensive opportunities of observing the results of different plans of treatment, from employing so efficient a remedy, I have considered it as a duty arising from my connexion with an Ophthalmic Institution, to state the evidence acquired by several years observation, directed to the subject in question.

The following remarks will be confined to that part of the extract which refers to the livid tint of the conjunctiva, and to the indelible dark speck of the cornea, produced by the local application of nitrate of silver; and to its inutility when applied to the diseased eye.

Having possessed repeated opportunities of witnessing the effects of this remedy during upwards of eight years, the latter three of which I have been officially connected with the Manchester Eye Institution, I trust I shall not be considered presumptuous in giving publicity to my opinions on this subject.

In most ophthalmic institutions, by far the greater number of cases of disease consist of opacities and ulcers of the cornea, and there is perhaps no part of the country in which so great a proportion of these affections depends upon strumous inflammation, as in Manchester and its neighbourhood. Among several hundreds of these diseases, in which the nitrate of silver has been used, both by applying it in substance to ulcers of the cornea, and to the conjunctiva of the lid, as well as in solution, not a single instance has occurred of the livid, olive, or, as it may be called, bronze stain, to which Dr. Jacob and

* Dublin Hospital Reports, vol. iii. p. 211.

Mr. Lawrence have alluded. The experience of several friends is fully accordant with the above statement, and particularly that of Mr. Barton, the present senior-surgeon of the institution, who has continued to employ the same remedy during a much longer period. I have certainly seen cases in which this discoloration has occurred; one instance in particular, where the stain which affected the conjunctiva of one eye only, was so deep that the difference between the eyes was perceptible at a very considerable distance. But here, as well as in several other cases which have come under my notice, there was no difficulty in accounting for the change of colour, as a strong solution of nitrate of silver had been applied for many months without attention to those precautions which are always necessary during its employment. Let not, then, so valuable a local application be discarded because, like all other good things, it is liable to abuse. For, indeed, the remark of Mr. Lawrence, with which Dr. Jacob apparently coincides, viz. "that he does not see how lunar caustic, which has been so much recommended, is to act upon the diseased eye beneficially," has a great tendency, when coming from such authorities, to throw into disrepute this useful remedy.

Dr. Jacob himself states, that he has not observed that the application of even a strong solution, for a fortnight or three weeks, will produce the effect, but he believes its continuation for six weeks, or two months, will do so. Is not this stating, in other words, that when properly used the nitrate of silver does not cause the stain, and *vice versa*? The remark, also, of the beneficial influence of the nitrate of silver in the hands of such a man as Scarpa, when closely examined, resolves itself into the general observation, that a surgeon can only employ a local remedy, or plan of treatment, with advantage, when he understands the description of cases to which it is applicable. That lunar caustic does act upon the diseased eye beneficially—very beneficially, in many instances, is a fact so firmly impressed upon my mind, by the results of the practice of others, as well as by the numerous trials of its efficacy which I have made, that not even the authority of Mr. Lawrence or Dr. Jacob can induce me to think otherwise, whilst I

have every day before my observation the great advantages derived from its use. To point out all those diseases of the eye in which the nitrate of silver is of service, and the regulations necessary for its proper management, with any moderate degree of accuracy, would lead me farther than is my intention at present: I shall be contented with briefly stating, that in cases of strumous inflammation of the conjunctiva, whether accompanied by opacity of the cornea or not, where the intolerance of light was so great as to render the least opening of the eyelids very annoying to the patient, I have known a single application of the nitrate, in substance, to the conjunctiva of the lid, effect so much relief by the next day, even when unaccompanied by constitutional treatment, that the patient has been enabled, in a moderate light, to keep the eye half open, without any uneasiness being produced. Not that I underrate the value of internal medicines in such diseases, but I have stated the result of the application, when unaided by any other means, with the view of proving its utility in a manner which can admit of no objections, founded on the use of other remedies at the same time. When the state of disease already mentioned is combined with an ulcer of the cornea, which seems to resist the usual treatment, or one from which a slough has recently separated, leaving a surface, in which the ulcerative process seems still going forwards, the application of a fine point of lunar caustic to the centre of the ulcer, which has been recommended by so many practical surgeons, has, according to my observation, fully justified the reputation it has acquired. Nor have I ever witnessed the indelible dark speck, or black opacity of the cornea, mentioned by Dr. Jacob, as resulting from the employment of the caustic, either in substance or solution. The only opacities of the cornea, caused by the healing of ulcers, however differing from each other in the extent of injured structure, appear to me divisible into those where the ulcerative action has been confined to the conjunctival covering of the cornea, and those where it has affected, not only this covering, but also penetrated into the proper laminar texture of this tunic. In the former, we have a semitransparent opacity, of a bluish or greyish white, which eventually disappears; whilst in the latter, the cen-

tral part of the opacity is of a different shade of colour, more nearly approaching the yellowish white of ivory, and which never again becomes translucent. The permanent dark spots, found both in the conjunctiva and cornea, produced by the presence of particles of gunpowder, charcoal, and oxide of iron, in these tunics, do not appear to bear a very strict analogy to the specks in question, in consequence of the different circumstances under which they are introduced into these textures. When the caustic is properly applied to an ulcer, no part of its substance is allowed to remain in the cavity except that portion which is dissolved by the action of the fluid, lubricating the ulcerated surface; and however satisfactorily the application may act, in stimulating this surface, so as to check the ulcerative absorption, before existing, and encourage the deposit of lymph, or that fluid, whatever it is, which accomplishes the filling up of the ulcer, still this is a work of time, and the cavity, during this period, is continually washed out by the secretion of tears, which becomes more plentiful immediately upon the application of the remedy.

The nitrate of silver, also, when acted upon by the secretion, forms instantly a white precipitate. If this precipitate should remain in the ulcer, which is never dry, but continually covered by fluid until it heals, this fluid will prevent exposure of the precipitate to the atmosphere; which, if I understand, Dr. Jacob adduces as the cause of its becoming black, or brown, and, consequently, will also prevent the formation of the indelible dark speck so often before alluded to; whereas, in the case of a grain of gunpowder, or any other of the particles before spoken of, being forcibly driven into the cornea, this tunic is lacerated, and if the eye was in a healthy state previously, this laceration is soon united by adhesion, so as to cover the foreign body, and protect it from the action of the secretion which continually moistens the eye. Besides the dark spots formed by foreign bodies imbedded in the conjunctiva and cornea, the only others which have occurred to me are those caused by prolapse of the iris, or choroid coat, owing either to wounds or ulcers, and those cases in which a small portion of the iris remains adherent in the centre

of an opacity, where an ulcer formerly existed.

Another instance of the utility of the caustic is in those cases of chronic purulent ophthalmia, so frequently met with in men who have been formerly on foreign service in the army, and generally known by the name of Egyptian ophthalmia, where the conjunctiva of the lids is so much altered by disease, as to present a granular surface. These cases, generally so obstinate in their nature, are more improved by the repeated use of the nitrate than by any other plan I have witnessed. In one at present under treatment, the patient, who had for many months required a guide to lead him, was so much relieved by the granulations being freely dressed with the caustic three times in the week, that, in the course of a month, he was enabled to walk alone through the streets; and up to the present time, an interval of more than twelve months, the improvement continues to proceed, notwithstanding he has suffered occasional relapses, owing to irregular attendance. Although, in prolapse of the iris, and many other diseases of the eye, this application is equally serviceable, I trust enough has been already stated to assist in confirming those who have been in the habit of employing this valuable remedy, and to induce those who have not, to give it a fair trial.

ON SUPPOSED DISEASES OF THE SPINE;

And the ill effects of a continued Recumbent Position.

By J. SWAN, Esq.

WHEN pain in the course of the spine has been complained of, and particularly if there has been any tenderness on pressure, it has been determined that inflammation existed in the ligaments, or some other parts equally affecting the integrity of the spinal column. The opinion founded on this symptom alone, has sometimes been verified by subsequent changes, but has too frequently proved erroneous, even when pain, tingling, and other nervous affections, have been present in the extremities.

If there be no disease in the seat of pain, nor in the tender part, from what does the altered sensibility proceed? When it is merely in the skin, the different parts of this, by being supplied with the spinal nerves, may have the morbid excitement conveyed to it through the sympathetic nerve. Thus, in diseases of the liver, pain is felt in the shoulder, from the communications between the hepatic plexus and the phrenic nerve. So each part of the sympathetic being also in connexion with each spinal nerve, may, according to the viscus affected, excite a morbid sensibility in that spinal nerve communicating with it, and appear in the termination of this in the skin. The same tenderness, from similar causes, may be present in the integuments of the chest and abdomen. But in some people the pain may be in the muscles, or the nerves supplying these, and arise from the same connexions with the sympathetic, but with a modified cause; for the same nerves can convey one impression to the muscular parts and another to the sentient, as may be instanced in the former by the use of the *nux vomica*, and in the latter by opium. The origins of the morbid excitement may be seated in the stomach itself; it may be also in the liver, intestines, kidneys, the bladder and uterus, and sometimes in the viscera of the chest. It is hardly necessary to mention that pains may be excited from the connexions of similar nerves, as between those of the uterus and limbs, and be felt in the extremities of the different branches of the nerves, in the same way as pain is experienced in the penis in diseases of the bladder.

When pain in the spine is complained of, and there is tenderness on pressure, should a constant recumbent position be had recourse to? If there be actual disease in any part of the spine, such as a projection of the spinous processes and thickening of the surrounding parts, no one can doubt the necessity or utility of keeping it in this manner perfectly quiet: but mischief may be going on in the anterior part of the spine and no decisive diagnostic symptoms be present. Is, therefore, so formidable a disease as that affecting the vertebral column and the parts connected with it, to be risked, because no external appearances of disease are present? If there be an equal probability that the

cause of the pain, &c. is not seated in the spine itself, should the recumbent position and a state of continued rest be enjoined, or merely because a sense of weariness or pain is to be obviated? If the confinement were to be of only a short duration, it could not be altogether objected to, but, in a modified degree, might co-operate with the other medical treatment in removing the irritating cause. When the disease is not in the spine itself, the pain and tenderness vary, both as to their seat and intensity, with the state of the digestive organs. But if there be considerable doubt about the cause of the symptoms, the recumbent position may be so used that the patient shall keep the spine sufficiently quiet, and yet not remain continually in this state. If a patient be kept in an entire state of rest in the recumbent position, and a beneficial result be not obtained within a moderate space of time—say after the lapse of some weeks, the consequences peculiar to this treatment must ensue. It will be asked, what is to be decided from so apparently harmless a remedy, or how can any mischief be produced? The circulation in the head must be increased by a position which favours the ascent and retards the descent of the blood; and by this, after a time, every part within the skull is encroached upon, the furrows on its inner table are deepened and extended in every possible manner, and we cannot suppose that the bone shall be thus acted upon by the increased circulation, and the cerebral mass remain uninjured? Undue pressure from diseases may produce great changes and a diminution of the brain, and I have seen this affected by long-continued determination of blood to it, and believe this may also be induced by disease, too much indulgence in the recumbent position, or too stimulating a diet. It is known that the muscles of the spine, and even the bones themselves, have their strength diminished by inaction, and consequently after a long use of the recumbent position, are unable to hold the trunk erect without the greatest exertion. But the change in the circulation in the head, arising from a long-continued recumbent position, leaves the brain unsupported by a sufficient quantity of blood, and produces most uncomfortable symptoms: doubtless the change in the position of the other viscera creates

some uneasy sensations, but in a very inferior degree. After an attack of paraplegia, from an affection of the brain, should there be an indentation larger than natural between two spinous processes, or deformity of one of these, and therefore it be supposed that the symptoms proceed from a diseased spine, and a recumbent position strictly adopted, if the patient could walk before this treatment was begun, it will be found, partly from the oppression the brain has been subjected to, he has entirely lost the command over the muscles, and that he cannot return to his former state until a long time has elapsed.

If the cerebral mass shall have suffered a diminution, can it be restored, or must it be supplied with the same inordinate quantity of blood continually, in order to put it in a sufficient state of tension? The brain and the circulation of its blood may be brought to their original condition by sufficient care and attention, but not without the greatest resolution; for besides the uncomfortable sensations produced in the brain itself, the difficulty of keeping the body erect is not a little increased by the pain excited in various parts from a change of position.

If the brain suffer, as I believe it does, ought a recumbent position to be used without the greatest caution? It is not in supposed diseases of the spine that the brain becomes oppressed, but frequently from slight indisposition and indolence. Thus a person feels unwell, and lies long in bed; he becomes enervated, and this position if continued increases his complaints: he soon becomes weary when up, and rests again and again until such a change is effected in the brain that he cannot, without the greatest difficulty, return to his former state. And if a change of so much importance can be thus effected, is it not of sufficient moment to pause before such a state is produced as time can with difficulty obviate? And ought not this to be a subject of serious consideration, not only to the medical profession, but to every class, both as respects their comfort, their health, and, above all, their mental faculties. Too much vascular action, whether produced by overfeeding or indolence, may injure the mental faculties, and Shakspeare has well remarked,—

“ Fat paunches have lean pates, and dainty bits
Make rich the ribs, but banker out the wits.”

BIOGRAPHICAL SKETCH OF KINDER WOOD, ESQ.

DEC. 16th, 1830, died at his house in King-Street, Manchester, aged 45, Kinder Wood, Esq. surgeon.

This eminent accoucheur was a native of Oldham, and at an early age was apprenticed to Mr. Cox, a highly respectable surgeon of that place, with whom he had extensive opportunities of becoming intimately acquainted with that branch of the profession to which he afterwards directed his chief attention. Having completed his apprenticeship, he became a pupil of the late Mr. Gibson's, at the Manchester Infirmary, and attended three courses of anatomical and physiological lectures, delivered by that distinguished surgeon. He afterwards repaired to London, and was admitted a member of the Royal College of Surgeons in 1807. On his return he commenced practice in Oldham, and soon obtained a considerable share of public confidence and support. Owing to the harassing nature of his numerous midwifery engagements, and the delicate state of his health, induced by almost constant exposure to wet and cold in a damp and bleak part of the country, he was reluctantly compelled to relinquish the many valuable connexions which he had formed during ten years of active and laborious practice in his native town, in order to procure a more liberal remuneration for his services with less personal fatigue.

Mr. Wood accordingly removed to Manchester in 1817, and was elected in the same year one of the surgeons to its Lying-in Hospital, an institution which annually admits upon its books nearly 4000 patients, and consequently affords excellent opportunities for obtaining an intimate practical knowledge of the many important phenomena connected with the puerperal state. He held the situation of surgeon in ordinary to that charity until within about a year of his decease, and uniformly attended to the discharge of his duties with the greatest zeal and assiduity. Mr. Wood met with an encouragement and support in Manchester that far exceeded his most sanguine expectations, and soon acquired a fair share of professional employment. Although subject to frequent and severe attacks of pulmonary catarrh, especially in the winter months, which prevented him from pur-

suings his avocations with that uninterrupted regularity so necessary to ensure an extensive practice, still, by unwearied exertion, and the most scrupulous punctuality in all his engagements, he succeeded in adding yearly many to the number of his patients, and at the time of his death was in the full enjoyment of a well-earned professional reputation. His aid being frequently solicited by neighbouring surgeons, in cases of difficult, preternatural, or complex labour, his consultation practice became a source of considerable emolument to him.

In early life, Mr. Wood had evinced a decided partiality for that department of the profession in which he afterwards acquired so high a character. During his apprenticeship he took rather copious notes of 320 labours, which he had himself attended, and since that time he has carefully arranged the particulars of every instructive and interesting case connected with obstetric medicine, that occurred in the course of his hospital and private practice. Thus he has left a valuable accumulation of facts, which, it is to be hoped, may ere long be laid before the medical public. Shortly after his appointment as surgeon to the Lying-in Hospital, Mr. Wood delivered a course of lectures on the theory and practice of midwifery, and the diseases incident to women and children, in the museum of that institution, which was presented to it by the late celebrated Charles White, Esq. By permission of the Board of Trustees, he enjoyed an unlimited use of Mr. White's valuable preparations, casts, and instruments, for the purpose of illustrating his lectures. He repeated this course at the hospital during three following winters. In 1826 he was appointed lecturer on midwifery at the Pine-street school of medicine and surgery, and had for his colleagues Mr. Turner, (its founder) Mr. Ransome, and Dr. James L. Bardsley. Mr. Wood soon acquired a high reputation as a successful teacher of midwifery, and each succeeding year added greatly to the number of his pupils. He printed a syllabus of his course, for the benefit of his class, which has the great merit of simplicity and perspicuity of arrangement. It was his constant aim to place information before his hearers in a plain, clear, and intelligible manner. He relinquished the flowery paths of eloquence for the

beaten track of experience, and never advanced assertions, or rules of practice, for which he could not assign satisfactory reasons. He rarely indulged in scientific disquisitions having no immediate utility beyond that of gratifying a thirst for knowledge, for he considered it his chief duty to furnish his pupils with the results of his own experience. The value of many of his original views and practical statements will be duly appreciated by those who had the good fortune to listen to his discourses. Mr. Wood was fully aware that the practice of midwifery is a source of great anxiety to the younger members of the profession, and that the occurrence of ill-managed, or unsuccessful cases, in their early career, is often fatal to their future advancement in life; but he clearly pointed out to them that the art rests upon very solid principles, which are easily acquired, and that it should be their first and leading object to attain a correct knowledge of the phenomena of natural labour.

Certificates of attendance upon Mr. Wood's lectures were received by the Royal Colleges of Surgeons both of London and Edinburgh. Mr. Wood was a member of the Medico-Chirurgical Society of London, and of the Literary and Philosophical Society of Manchester. His contributions to the printed Transactions of those societies indicate a close observation of, and an intimate acquaintance with, disease.

In the 7th volume of the Medico-Chirurgical Transactions of London, Mr. Wood published a very interesting and important paper, entitled "History of a very fatal affection of the Pudendum of female children." Of this disease he had seen twelve cases, all occurring in patients between one and six years of age; of these, only two recovered, and they were visited in their early stage. The description given by Mr. Wood of this affection is very clear and correct. He has judiciously observed, that there is one point of view in which a consideration of this disease is highly important. "The instances in which parents, on behalf of children, bring forward individuals upon the charge of rape, are disgustingly frequent, and it can scarcely be doubted that this disease has been frequently considered in court as evidence of violence and venereal affection; inflammation, ulceration, and discharge. hav-

ing always had particular attention in the evidence." The same volume contains the "History of a case of Chorea Sancti Viti, occurring in an adult, and cured in an unusual manner;" and the "History of a case of Cæsarean operation," both supplied by Mr. Wood. The first case resembles those of periodical jactitation, or chorea, published by the late Dr. Robert Watt, of Glasgow. The involuntary muscular actions were removed by the beating of drums. By the use of the drum at the commencement of the involuntary motions, the attacks could be instantly checked; and by thus breaking the chain of irregular associations, which constituted the disease, a cure was at length effected. In the case of Cæsarean operation, though attended with a fatal result, it appears, from the post-mortem examination, that the substance of the uterus had received little injury, and that the patient died from extensive inflammation of the peritoneum—if not induced, at least accelerated, by the injury the external organs had received from frequent examinations made previously to Mr. Wood's being requested to visit the woman.

In the 9th volume of the same Transactions, Mr. Wood published "some observations on the cure of Hydrocele of the Tunica Vaginalis Testis, without procuring an obliteration of the sac." He proposed the puncturing of the tumor with an abscess lancet, then drawing out a small portion of the sac with a hook, and cutting it off. He has related four cases illustrative of the successful application of this method of cure. In three of these cases the sac was not much thickened, "a material circumstance (says Mr. Wood) to notice, because in old, and very large hydroceles, and where the sac is much thickened and indurated, a stimulus much greater than the means here proposed will produce, is required, and hence it will be necessary to guard against disappointment by putting the proposed plan in execution only where there is a probability of success, which is in moderate sized cases not too old, and where the sac is not too much thickened and indurated." In allusion to excision of the sac for the cure of hydrocele, Mr. Samuel Cooper, in his excellent "First Lines of Surgery," remarks: "Though an unqualified condemnation of the practice of excision,

as it was formerly executed, is now the general sentiment, I would not wish the remark to apply to Mr. Kinder Wood's method, which has been already spoken of, and which, from the reports made to me about it, I am inclined to think is both mild and effectual."

The 3d volume of memoirs of the Literary and Philosophical Society of Manchester contains a valuable paper by Mr. Wood, entitled, "Observations upon the Callous Tumor;" and in the 4th volume, he published "Some Observations upon the local Prevalence of Idiotism, and its Connexion with Goitre." In the latter paper, Mr. Wood has noticed the frequent occurrence of idiotism in a part of the township of Oldham called Sholven, unconnected with goitre, although the goitrous tumor is frequently met with in the neighbourhood, particularly in young females. He attempts to prove that the alleged connexion between goitre and idiotism, so often intimated by travellers, and which Foderé has endeavoured to establish, is more than doubtful and uncertain.

Mr. Wood published some highly-valuable observations upon Dr. Lyall's collection of evidence regarding prolonged gestation, in one of the early numbers of the Edinburgh Journal of Medical Science. This article evinces a practical acquaintance with the subject of which it treats, and an extent of research highly creditable to the talents and industry of its author. The medical evidence, as given in the Gardner Peerage cause, before the House of Lords, in 1825, is examined with great candour and much ability.

Besides furnishing the papers above enumerated, Mr. Wood had been employed for some time in collecting materials for a separate volume on midwifery, embracing the consideration of some of the most important points connected with the practice of the art. The essays "on Uterine Hæmorrhage, and the best mode of treatment in alarming cases of this kind;" "on Rupture of the Uterus during labour;" "on Inversion of the Uterus;" and "on Impracticable Labour from Distortion," are left in such a state of readiness for the press as to require only a few verbal, and other trivial alterations, before being submitted to the public eye, should this be the intention of Mr. Wood's family.

Mr. Wood's professional reading was very extensive, and he possessed a highly valuable collection of books on midwifery. In 1828 the Humane Society of Manchester presented him with a silver medal, for his successful and meritorious services in a case of suspended animation from immersion in the river Irwell.

During the winter of 1829 Mr. Wood experienced a very severe bronchitic attack, accompanied with anasarcons swellings of the lower extremities, and some other unpleasant symptoms. Though he so far recovered from this ailment as to be able, with great exertion, to visit his patients, still it was but too evident to his professional brethren that his constitution had received an irreparable injury. He continued to practise until within a month of his death, when the difficulty of breathing became so distressing, and the dropsical effusions increased so rapidly, as to confine him wholly to his room. At length symptoms of hydro-thorax occurred; and on the 16th of December, after an illness borne with pious resignation and fortitude, he terminated his earthly existence. He was attended by his friend Dr. Hull, and the writer of this brief memoir. Mr. Wood's moral excellencies will be justly appreciated by those to whom he was most intimately known. In the several relations of husband, father, and friend, he afforded an example worthy both of imitation and respect.

J. L. B., M.D.

Chatham-Street, Manchester,
13th Jan. 1831.

ANALYSES & NOTICES OF BOOKS.

“L'Auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

A Manual of Analytical Chemistry. By HENRY ROSE, Professor of Chemistry at Berlin. *Translated from the German by JOHN GRIFFIN.* London, 1831, pp. 454, price 16s.

THIS work merits the attention of all interested in the branch of science to which it relates: it is the production of one of the most distinguished analytical chemists in Europe, and contains the result of his labours, detailed with all the minuteness and perspicuity which are characteristic of the Germans. The work is divided into two parts, whereof the first relates to “qualitative” chemical ex-

aminations; the second contains instructions for “quantitative” analyses. The former gives clear and easily practised directions for detecting the constituents of chemical compounds of frequent occurrence, so as to make known the nature of the substances without any regard to their quantity. The simpler compounds are first considered, as those consisting only of a base with an acid, or of a metal and a non-metallic body; and these analyses are well fitted for initiating the beginner into the subject, and leading him to the more complicated analyses which follow in the subsequent sections.

The second part is devoted to a description of the methods to be employed in order to separate the constituents from one another, so as to estimate their quantities. The methods used for this purpose are so arranged that the bodies called bases come first, and are followed by those whose compounds possess acid properties. Thus, under potassium is described the determination of potash as to quantity; and so on of others. Explanatory titles to the paragraphs are introduced in this part by the translator, which add to its value. The chief point of disagreement between the original work and the English version of it is, that Rose uses the nomenclature of Berzelius, which Mr. Griffin rejects, and we think very properly, as not intelligible to the generality of readers in this country. The translator has conferred an obligation on science by the publication of this work, and ought to be encouraged by all who feel interested in promoting so important a branch of chemistry as that which relates to analyses.

Lectures on Anatomy, interspersed with Practical Remarks, Vol. II. By BRANSBY B. COOPER, F.R.S. &c. London, 1830, pp. 308, price 15s.

OUR chief reason for noticing this volume is to express our satisfaction at seeing some of the objections obviated which we offered against the plan of the work, when noticing the preceding volume. The lectures are divided according to subjects, and do not accord with the daily discourses, but each of them includes, perhaps, the subject-matter for a week's discussion in the anatomical theatre. The work, we are informed in a notice at the beginning, is expected to be completed in four vo-

lunes, and the rapidity with which the second has followed the first gives good promise of their speedy appearance. We have here the general and particular anatomy of the muscles, cellular membrane, and the common integuments. The descriptions are remarkably clear, and many of the remarks interesting and instructive.

ROYAL INSTITUTION,

Friday, Feb. 4, 1831.

WHITLOCK NICHOLL, M.D. VICE-PRES.
IN THE CHAIR.

Mr. Brande on the relation of Vegetable Alkalies to common Alkalies, and to certain proximate principles of Vegetables.

SINCE chemical experiment proved that the calces of iron, lead, zinc, tin, &c. are compounds of those metals with oxygen, and not the metals compounds of their calces with phlogiston, the elementary nature of the metals, though often assailed, has never yet, in any instance, been actually disproved. The famous experiment, we believe, devised by Berzelius, and since familiarly known as the metallization of ammonia, was thought at first by many, and by that celebrated chemist is still considered, as affording evidence of their compound nature; and if the inspissated mercury really were an amalgam, the proof would be incontestible: for as by other experiments ammonia is proved, both analytically and synthetically, to consist of two gases, hydrogen and nitrogen, if it can afford a metal whose ghost, as Mr. Brande emphatically called it, has by some theoretic chemists been named ammonium, analogy would almost compel us to admit a similar constitution to prevail amongst all the metals, even though they have not yet been decomposed. But whatever may be the fact as to the simple or compound nature of the metals, the apparent metallization of ammonia cannot be received as proof; for the inspissation of the liquid mercury is believed, by the most respectable authorities, to be owing rather to the inclusion of air (hydrogen gas) within the fluid mercury, as in the case of spongy platinum, than to the presence of another metal. Moreover, it must be borne in mind that the so called ammonium has never been exhibited in a separate form, never been transferred from one com-

pound to another, as calcium, sodium, and potassium may be, even when not isolated in their transit.

Shortly after the discovery of morphia, Sir H. Davy proposed to electrize it in contact with mercury, to ascertain whether it had a metallic base; but his preliminary investigations on this point not being satisfactory, they were never pursued, nor even recorded. Lately Mr. Brande has taken up the inquiry; and having electrised morphia, cinchonia, quinia, &c. in contact with mercury, proceeded to lay a summary of the results before the members of the Royal Institution. In these experiments (some account of which has been published in the last number of the Institution Journal) a globule of mercury, in contact with the moistened vegetable base, was rendered negative, feebly at first, and afterwards by a more powerful voltaic combination. The morphia (for this alkaloid was the subject of the first experiment) was believed to be perfectly pure; but although the process was continued for a due time, in one instance exceeding twenty minutes, no change in the fluidity of the metal was observed, nor did it, on being transferred to a glass of pure water, exhibit any action on the liquid nor any appearance of having united to foreign metallic matter. The results of the experiments with cinchonia were similar to those with morphia; but with quinia they were less decided, the alkaloid, during the first few minutes of electrization, seeming to inspissate the mercury, and subsequently the inspissation ceasing to proceed. This obscurity was, however, afterwards ascertained to be owing to the obstinate adhesion of a minute portion of lime, by which the fluidity of the mercury became, as stated, in a slight degree affected. But no continuance of electrization increased this, as ought to have been the case had the alkaloid been delivering up its metallic base: the inspissation arrived at its maximum during the first five or ten minutes, and no further effect could be produced. It was doubtless owing to the calcium of the adherent lime; a source of error which, in less experienced hands, might have escaped detection.

The great difference of the proportions in which the alkaloids and alkalies enter into combination with the various

acids, as compared with each other, was considerably dwelt on by Mr. Brande, as indicating a difference in their nature. In illustration of this he exhibited the following table:—

Sulphuric acid, 40 parts will saturate.....	{	17 parts of ammonia.
		32 soda.
		48 potassa.
		325 morphia.
		360 quina.
		318 cinchonia.

But this, although an interesting fact, cannot be admitted as an argument of any great weight in the discussion of their identity or non-identity with the metallic oxides, soda and potassa; for ammonia, avowedly decomposable into hydrogen and nitrogen, as are the alkaloids into hydrogen, nitrogen, and sometimes oxygen, is almost twice as potential in its saturating power as soda, and very nearly three times as efficient as potash; both of which have avowedly metallic bases. Much more evidence is necessary to settle the question of the similitude of the alkaloids with the volatile alkali, on the one hand, or with the fixed alkalies, on the other; and therefore, on the question of their relationship we should rather return a verdict, with the characteristic caution of the north, of “not proven,” than “not guilty.”

Mr. Brande exhibited many very beautiful specimens of the vegetable alkaloids, and the other proximate principles of vegetables, of which, as the time allotted for these discussions had elapsed, he was obliged to postpone the consideration of to some future opportunity.

Among them, however, the specimen of elateria excited the chief attention, on account of its very recent discovery by Mr. Hennell, of Apothecaries' Hall. He obtained this principle by digesting elaterium in alcohol, evaporating the solution, and treating the residuum with sulphuric ether, which removes an intensely bitter substance—the elatine of Dr. Paris, and leaves the elateria.

In the library were numerous volcanic specimens from Vesuvius, presented to the Institution by W. Pole, Esq. Also a curious slag, said to be the residue of a burnt haystack: of this we shall have something more to say hereafter, when it has been analyzed. It would be interesting to ascertain if slags are found in the sites of those ricks of which so many

have been lately burned: perhaps our country readers may have an opportunity of informing us.

The elasticity of feathers was well illustrated by an experiment performed in the library, of immersing feathers, rumpled and bent in almost every direction, in boiling water, and on withdrawing them they were seen to have resumed their regular and natural form. This was accidentally discovered by a specimen of a foreign bird, the plumage of which had been very much rumpled, falling into some hot water, which restored it; and the process appears to be one that may prove of much advantage to the preservers of those beautiful animals.

On Friday, February 11th, Mr. Harris will offer some observations “On the Power of various Substances to Intercept Magnetism.”

MEDICAL GAZETTE.

Saturday, February 12, 1831.

“Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso.”—CICERO.

NEW LUNACY BILL.

IN our last number, wherein we announced that a draft of a new lunacy bill had been prepared for submission to parliament on an early day, (the 14th instant) we were prevented by want of space from entering into details, but we did enough to call attention to a very important subject, and to stimulate to exertion those whose interests were involved in the contemplated measure.

The press of other matter, which scarcely admitted of delay, led to our former article being abruptly cut short, just as we were entering on an account of the changes which it is proposed to introduce into the new act. The first of these relates to the name by which establishments for the insane are hereafter to be designated: it is proposed that they be called *Retreats*, instead of Licensed Houses, and that the qualification to keep such be called *Register*,

instead of License. To us it appears a matter of absolute indifference which appellation is adopted, and certainly it is a change scarcely of sufficient importance to form any prominent part of a legislative enactment. The framers of the bill, however, it is obvious, think differently, inasmuch as it is the only part of their arrangements, the motives for proposing which are explained. The modified expression, we are told, is intended "to elevate the character of public receptacles for the insane, and to remove any feeling of degradation which may be attached to words applied in legislative measures *to inferior subjects.*" By inferior subjects we suppose are to be understood places licensed for the sale of beer, and that it is the anxious wish of the framers of the bill to prevent "Retreats" from being mistaken for alehouses. An important, doubtless, and very praiseworthy precaution;—but we would venture to suggest, that "to elevate the character of public receptacles for the insane," will be found an extremely difficult task while so much pains is taken to depress the character of those who keep them. The prevailing principle of the bill assumes as the only pretext for the rigour and illiberality of its provisions, that all those gentlemen who devote themselves especially to the treatment of lunatics, are a set of ignorant and rapacious knaves, wholly unworthy of the consideration attached to the other members of the medical profession. We are rather astonished, however, as so much importance is attached to this same change of name, that such an incongruity should have escaped the writer as calling an asylum for men a "*Male Retreat*," and one for women a "*Female Retreat*," as if the houses, and not the inhabitants, were of different sexes.

One of the parts of the lunacy bill most important to the medical profession, because affecting the greatest

number of them, is that which relates to certificates of insanity.

By the old act (sect. 30), it is provided that every certificate of insanity for confining a lunatic shall have the signatures of two medical men, "who shall have separately visited, and personally examined," the patient to whom it relates. The order for *separate* visitation is absurd enough. It is in difficult cases a serious impediment to a correct opinion, and is so easy of evasion, that it is quite astonishing that it should have been retained after the objections which were made to it in the Committee of Peers, and the justness of which subsequent experience has confirmed. This section evinces the strongest distrust of professional men; for it throughout assumes the frequency of collusion. But the suspicion of medical integrity is still more openly manifested in the corresponding section (27th) of the new bill. It enacts, that no two medical practitioners, "*being in partnership,*" shall sign a certificate. Moreover, it is further enacted, that "no physician, surgeon, or apothecary, shall sign any certificate of admission to any Retreat, who is wholly or partly the proprietor, or the regular professional attendant of *any public hospital, or charitable institution in which insane persons are received, or of any Retreat registered under this act;*" and any physician, &c. who shall give a certificate, "*without adding his signature and place of residence, shall be deemed guilty of a misdemeanor.*"

We want words to express our indignation at proposals so preposterous and absurd: the first supposes that no man can enter into partnership without becoming a rogue; the second deprives the public of the protection against improper certificates of insanity, which the assistance of those who must of necessity be best acquainted with the subject is calculated to afford; and the third converts a mere omission, which might

happen to any one, and which can scarcely proceed from any thing but inadvertency, into a legal offence, for which the individual is liable to prosecution in a court of law, and to the expenses and penalties thereon attendant. Indeed, the danger of medical men incurring penalty or prosecution for misdemeanors, whether they are engaged in lunacy or general practice, is so great throughout this bill, that no one ought even to attend an insane patient, much less to certify to his insanity, without having this voluminous act in his pocket, and a lawyer at his elbow to expound each of its sixty-two sections, clothed, as they are, in all the obscurity of legal technicality.

But setting aside altogether the oppression of medical men involved in these provisions, they are not less injurious if viewed exclusively with reference to the public. In the country, for example, prohibiting two practitioners who happen to be partners from certifying as to insanity, will necessarily add considerably to the expense incurred by the friends of the lunatic, and often lead to serious delay and inconvenience, and all this to avoid the assumed risk of practitioners, who are partners in business, being also partners in conscience, even although there be no temptation to dishonesty; for, be it remembered, that such certificate can never be signed by any two persons for the purpose of having an individual incarcerated in a retreat with which they are in any manner connected, directly or indirectly. Why, therefore, two gentlemen who are in partnership should not certify to the insanity of a patient, appears to us as difficult to explain, on any rational grounds, as their prohibition would be from attending together in any case of danger, lest the one should be biassed in his opinion by deference to the other.

Still more preposterous than this is excluding the certificates of those

connected with establishments for the insane; it amounts, indeed, to a declaration, that because a man has enjoyed opportunities of studying insanity greater than that which falls to the lot of others, therefore his evidence is to be rejected—because he has made himself thoroughly acquainted with the subject of which he speaks, therefore his opinion is not worth having. This clause is so repugnant to common sense, that we think it impossible for the legislature to adopt it, even during the present epidemic antipathy to “mad-doctors.” But the bill itself involves a manifest contradiction in regard to this very point; for, after prohibiting in express terms “the regular professional attendant of any public hospital, or charitable institution, in which insane persons are received” (Sect. 27); it proceeds in another place to add, “that nothing in this bill shall extend to be construed to the Royal Hospital of Bethlehem, or to the royal military or naval hospitals, or to any lunatic asylum already erected and established,” under certain acts which are specified. To us this appears a contradiction in express terms. Is it meant that notwithstanding the first sweeping exclusion, the medical officers of certain “charitable institutions in which insane persons are received” shall, nevertheless, be permitted to give certificates of insanity? And if so, is this fair towards the medical officers of similar institutions who, not being included in this act of grace, are denied a like privilege?

Formerly, a fortnight might intervene between obtaining the certificate of insanity and the confinement of the individual; but in the proposed act the period is reduced to two days. The former was unnecessarily long; the latter is inconveniently short, as it must often be impossible to make the requisite arrangements within this interval; and thus the parties will be subjected to in-

creased expense in having the certificates renewed. Probably something intermediate between the two would be better than either extreme.

In the 36th Section another novelty presents itself; it is, that in every Retreat there shall be kept a book, for the purpose of enabling the commissioners and visitors "to make minutes in writing" of the state of the establishment, the condition of the patients, "and all such other particulars as they shall think deserving of their notice, together with their observations thereupon." So far we quite approve of the arrangement; and we naturally supposed that it was intended, if any thing were unsatisfactory so as to require explanation, or if any thing were so obviously wrong as to render its amendment imperative, consulting the book after each visitation would enable the proprietor of the establishment to meet the wishes of the commissioners. But behold what follows: these documents "shall be open to the inspection and perusal of every person visiting the patients of such house." This is publicity with a witness! As regards the friends of the unhappy inmates, how harassing to think that any "particulars" connected with the patients may thus afford materials to gratify the curiosity of all who find a pretext for visiting the establishment; and as regards the proprietor, how injurious and unjust that the observations—the unanswered observations—at once the charge against him and his condemnation, should thus be publicly recorded, while no adequate means of defence is afforded him.

The mention of the books to be kept at the retreats, reminds us of the registers to be filled up by the medical attendant. That for the annual report—a new one—is very good; but the weekly return which also exists in the expiring act, contains one requisition which is not only objectionable but betrays great ignorance on the part

of those by whom it was framed. The medical attendant is required to certify in express terms, and without qualification, the precise number of patients who are curable and who are incurable—or in other words, to record a positive, explicit, and definitive opinion as to the result of every case, though the patients may some of them not have been twenty-four hours under his care. As the "weekly register" existed in the former bill, we presume that it has been signed—for there is no appeal from common law to common sense; but if any medical man, without having protested against it, and without feelings of indignation, felt compelled to stamp with his hand a decision which his judgment, in many cases, would not have arrived at, we can only say that he is worthy of the opinion which seems to have been entertained of him by the framers of this bill. He is a lucky man whose fiat has not been stultified by the result, and whose signature to the weekly register has not, in repeated instances, been the permanent record of an error.

The powers vested by the act in the Commissioners and Visitors are preposterous, and such as constitute an anomaly in English jurisprudence. It erects them into a perfect Inquisition. Though twenty-two in number, yet a junta of three of them may *grant or revoke* licenses, and may visit and examine houses as often as they please, and even in the night. They may summon any person (Section 49, New Bill) to appear before them, "to testify the truth touching any matters relating to the execution of the powers given by this act;" and if they refuse to attend, or to be sworn and examined, may, for every such neglect or refusal, forfeit not exceeding 50*l.* nor less than 10*l.* The summons may, or may not, state the matter on which a person is required to attend. He is introduced to the Commissioners sitting in form, with

their clerk in waiting;—he is interrogated on matters regarding which, not being informed of their nature before he arrives, he is not, perhaps, prepared to speak, and may require advice how to answer;—his unpremeditated statements are taken down *by a short-hand writer*, and upon these very answers is sought, and may possibly be found, subject-matter for the respondent's prosecution; nor is a copy of the notes so taken vouchsafed, though applied for. Every person, whether a relation of the lunatic, a friend, medical attendant, servant, or stranger—all are alike amenable to the summons.

A medical man may feel confidence when summoned to attend this Court, from a knowledge that some of its members are his brethren; nor will he fail to receive all the protection they are able to afford—for there are not to be found, in our profession, more honourable men than the medical commissioners. But again, in the very constitution of this Court, is manifested the jealousy of the medical character. There are only five physicians to seventeen lay-commissioners;—consequently the voice of the former avails little, where their number is so disproportionate.

The only other section in the new bill on which we shall offer a remark is the forty-fifth, which relates to the persons with whom lunatics are privately confined. We have read this section several times with attention, but we doubt if we comprehend it even now. We believe the intention in the alteration of the wording of this section, (which corresponds with the forty-first in the yet existing act), is to prevent an insane person from being removed from home to any private abode, under the care or charge of any one except a relative or committee; and that no person is to harbour, entertain, or lodge such patient, without having a certificate signed by two medical practitioners, and without

making a return of the name and residence of such patient, and by whose order he is confined or removed. How this enactment is to be met when it may be thought advisable for a patient to travel with a keeper—by no means an uncommon circumstance—is difficult to imagine. This enactment is plainly of the utmost importance to the relation of every lunatic desirous of his cure, yet anxious to conceal the existence of such a malady in his family: but it is of still greater importance in reference to the successful treatment of the insane. If legal impediments be thrown in the way of removing a lunatic patient from his own home to private lodgings, which, for his recovery, is almost always indispensable, and which is already a measure generally reluctantly complied with by his friends, there will in future be comparatively few such patients cured, and consequently a larger number will be consigned to Retreats.

Such are the chief, but by no means the whole of the objectionable clauses of this proposed legislative enactment; and which we have no doubt will become part of the law of the land, unless met by the timely and vigorous opposition of the influential part of the profession. Meantime we would suggest, the more truly to describe it, that, after the words “to regulate the care and treatment,” there should be inserted, “and prevent the cure of insane persons; to embarrass their medical attendants; and add to the difficulties and distress of their relatives.”

With this expression of our sentiments, we for the present take our leave of the subject. Should the bill pass in its present form, and in “the full vigour of its imbecility,” it will do more to injure the condition of lunatics, and to aggravate the perplexities of their friends, than did all the worst abuses which it is intended to obviate.

LONDON UNIVERSITY.

WE regret to state that the discontent among the pupils continues unabated. A meeting was held on Tuesday for the purpose of endeavouring to effect the removal of Mr. Pattison, on the ground of incompetency. The Professor addressed his class next day—promising to overlook what was past, but threatening to bring forward, with a view to their expulsion, any who took part in such proceedings hereafter. In despite of this, it is intended to hold a meeting on Saturday, and it has been proposed to invite Colonel Jones, or some other radical, to take the chair.

 REPORTS OF CASES OCCURRING
AT PUBLIC INSTITUTIONS.

LA PITIÉ.

CASE TREATED BY M. SERRES.

Perforation of the Gall-Bladder—followed by Peritonitis and Death.

A YOUNG man, aged twenty-four, of sanguine temperament and robust constitution, began about the middle of December to complain of headache and pain in the lumbar region; this was succeeded by purging, and the patient now left off his work and took little food, his sustenance being chiefly tea, tisanes, and similar articles. His complaints increasing, he was admitted into the hospital on the 17th.

18th.—The countenance expressive of suffering; pulse frequent and full; tongue rather red; tenderness upon pressure about the abdomen; still some looseness; he has had an attack of epistaxis.

Thirty leeches to the umbilical region, to be followed by a poultice.

Barley-water.

21st.—Much the same; some inclination to vomit; two liquid stools. Twenty leeches were applied on the 19th, and are to be repeated to-day.

23d.—Respiration impeded; no expectoration; mucous rattle heard over the whole of the posterior part of the right lung.

Eight grains of tartarized antimony in four ounces of vehicle.

Half only of the above mixture was taken, by which vomiting was produced, followed by tenderness of the abdomen. The pulse was frequent; the tongue dry; the teeth and lips covered with sordes; the skin hot and dry.

26th.—Decoction of snake-root was given as a substitute for the barley water, and some Kermes mineral administered. The belly became somewhat tympanitic, and tender to pressure; the skin perspiring.

29th.—Twenty leeches were applied to the belly on the 27th, and the barley-water resumed on the 28th. To-day cupping has been practised on the right side of the chest, in consequence of the inflammation extending. Tongue dry; perspiration continues; prostration augments.

31st.—Three grains of sulphate of quina exhibited.

Jan. 1st.—All the symptoms increasing; pulse 120-5, small; belly tympanitic and tender.

Quina omitted.

Two flying blisters to the inner part of the thighs.

4th.—The pulse continuing frequent and being hard, added to the state of the respiration, induced M. Serres to have the patient bled to the extent of a palet and a half.

The patient lingered till the 10th, when he died exhausted, having retained his mental faculties unimpaired to the last.

Autopsy, 36 hours after Death.—Some degree of congestion was found in the lungs, and the brain is said to have been injected; but it was in the abdomen that the principal appearance of interest presented itself. The belly was somewhat tympanitic; it contained a quantity of serosity of a yellow colour in the peritoneal cavity. The epiploon adhered to the right side of the bladder, and to the intestines; the ileum also adhered to the bladder, and was almost gangrenous at this point; there were some ulcerations on the inner surface.

On prosecuting the examination, a perforation was detected in the gall-bladder; this was situated at its posterior part, corresponding to the inferior lobe of the liver. The loss of substance was nine lines in diameter each way; and the opening communicated with the peritoneum, giving exit to the bile. There was a slight contraction at one part of the cystic duct.

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE,

DELIVERED BY DR. ELLIOTSON,

January 17, 1831.

Complicated Case—Ague, with Cerebral Affection and Bronchitis—Bronchitis—Epilepsy—Inflammatory Dropsy—Paralysis—Ichthosis—Chorea—Porrigo Decalvans.

I took in some very interesting cases on Thursday, gentlemen, of affections of the surface of the body, which I am anxious to shew you. The patients will be brought down presently, but I will state, in the meantime, that in the course of last week seven cases were presented—three among the men and four among the women, and one case proved fatal.

Respecting the case that proved fatal, it was one in which a circumstance occurred which very rarely happens in the present advanced state of medical science to a practitioner who is at all active in his profession, and takes pains with his cases,—a full diagnosis was not made. I could not satisfy myself about the whole of the man's complaints. He had been admitted about a fortnight before in a state of confusion of mind, so that I could not get from him a true account of what his sufferings really were, and no friends came with him. He told me at first, before I was aware of his being in a state of mental disturbance, that he had the ague, that he shivered violently, that the shivering came on at particular times, every other day at 10 o'clock in the morning; that he then had high fever, but very little sweating; and this statement I of course believed. I ordered him the new French preparation from the willow, which answered so well in a case of remittent fever that I mentioned formerly, five grains every six hours. The next day, however, when I went to see him, I found him labouring under difficulty of respiration. He complained of no pain; he declared that he had none, but he said he had coughed, and it was very evident that his breathing was deranged. I applied the stethoscope, and it became instantly evident that the affection of the organs of respiration was bronchitis. There was a loud sonorous rattle all over the chest; every part of the chest gave a snoring sound as he breathed. The ague, if such existed, or the remittent fever rather—for it appeared, by his own account, that although he shivered every other day, he was never free from morbid heat;—his ague, or remittent fever, now became comparatively unimportant: the affection to be treated was the bronchitis. He was bled freely—in fact, until he fainted, and about a pint answered that purpose. He was very much relieved by the depletion, and I did not judge it at all necessary to give him any me-

dicine. He continued the salicina as before, on account of the bronchitis, because I have not found that the sulphate of quinine has any tendency to increase any inflammation that may be present. If a person be labouring under ague, and inflammation of the lungs or the eyes, for example, co-exist with it, or of an other part excepting the stomach (and it would not be right to continue the sulphate of quinine in that case, because it would come in contact with the inflamed part, and possibly be rejected), I have not found this remedy increase the inflammation; and hence I have made it a rule to carry on the two species of treatment together—that for ague, and that for inflammation. It is often of the greatest importance to arrest the ague, for in the fits of ague the constitution is shattered, and the excitement of the hot stage increases any inflammation that may be present.

This patient went on very favourably until the fourth day, when I again found the breathing very difficult. Unfortunately, people catch cold here continually, on account of the great draughts in the hospital. I found it necessary again to bleed him to syncope, which required the abstraction of a pint of blood; and it was also requisite to give him medicine to co-operate with the depletion. He took five grains of submuriate of mercury every six hours, and the salicina was now omitted, as I could not discover, from the account given me by the sister of the ward, that he really had any shivering since his admission, and it was now ascertained that he wandered in his mind. He had been observed to complain of pain in the head, and he was cupped the next day to fourteen ounces at the back of the neck, and was blistered there, and the calomel was exhibited every four hours instead of every six hours as previously. His breathing very soon became healthy, but he still wandered in his mind—there was not furious delirium, but he still wandered. I found appeared now, from all the inquiries that could be made, that his mind was in this state when he came into the hospital, and I considered it very likely that he was the subject of chronic inflammation of the brain. He rapidly grew enaciated, and died.

On opening the body there was no other diseased appearance in the lungs than rather more congestion in the back part than is usual. Of course there is always great congestion at the back part of the lungs, from the gravitation of the blood, but in this instance the accumulation was greater than usual. The bronchitis seemed to have been pretty well got the better of: only some congestion still remained, which caused greater congestion of blood than usual in the posterior parts of the lungs. The brain, however, shewed marks of chronic inflammation; it was exceedingly hard throughout. Chronic inflammation of the brain fre-

quently induces hardening of that organ, but sometimes the reverse. Acute inflammation produces softening much more than induration. When you see general induration of the brain, it is the result almost always of chronic inflammation. A morbid hardness, or even softness, at one particular spot, is frequently seen, unaccompanied by any marks of inflammation at all; but when the induration is general, it is allowed by pathologists to be usually produced by chronic inflammation.

I am quite satisfied with the treatment of the case, for the ague did not appear to have existed to any considerable degree, and if it had, it was cured, and the bronchitis was fully and successfully treated; but with respect to the affection of the brain I imagine he must have been more or less insane for a considerable period.

Bronchitis.

There was, during the same week, a case presented among the women of *bronchitis*, which was treated without any medicine—simply by bleeding. The case presented nothing remarkable in itself, but as it was treated simply by bleeding and starving, it may be a good illustration of the little necessity there frequently is for giving medicines in moderate inflammatory affections.

This woman had rapid respiration, but she could lie down perfectly well, and she had no pain. There was sonorous rattle all over the chest; she was bled to twelve ounces; the blood proved buffed and cupped. She was so much better within five minutes after being bled, that it was not judged necessary to give her any medicine whatever. Although the next day it was thought advisable to take a little more blood, nothing more was judged necessary, and she became perfectly well.

I have no doubt that in a case of this description many persons would have given a few drops of antimonial wine, or of ipecacuanha wine, or various things, in a saline draught, or camphor mixture, and thought that they were thus doing a great deal of good, while it was the bleeding and the diet that did every thing. When cases of inflammation are severe, or threaten to be so, it is not only necessary to take away blood and starve the patient, but also to have recourse to powerful medicines. But if antimony be given, it should be in full doses, so as to nauseate; if colchicum be given, it should be in full doses, so as to purge, or nauseate; or if mercury be given constitutionally, it should not be half a grain of calomel every eight hours, but a few grains every few hours. Some persons, however, make it an invariable rule, in cases which might be successfully treated by bleeding and starving merely, to give some mess or other—twenty drops of antimonial wine, twenty drops of ipecacuanha wine, nitre, camphor mixture,

and other things, and incessantly change the medicine, as if they had the fidgets, and then think the case shews the power of medicine. This is a sort of fiddle faddle practice, sufficient to make pupils laugh at physic and physicians. Whenever medicine is not required, it is absurd to give it; and if it is required, it is absurd to give it in a way that can do neither good nor harm. I have a very high opinion of a large number of drugs, but not of the trifling and unnecessary use which is sometimes made of them.

Epilepsy.

A case of *epilepsy*, with *aura*, went out of the hospital in consequence of the man not being satisfied with my mode of treatment. It was a very interesting case of this disease, and I fully spoke of it in a former clinical lecture. The *aura* evidently arose from an affection of the head, because the whole affection had arisen from a blow upon the head. The man had pitched upon his head, and the epilepsy was attended by violent pain of that part, and yet an *aura* began in the great toe, and ascended to the body before the fit came on. The case was also attended by violent vomiting. By strict antiphlogistic treatment, and by mercurializing—that is to say, bleeding continually about the head, and giving him mercury, and putting him on low diet, no fit came on after the first day he was in the house; and under the use of prussic acid the vomiting ceased, though, before its exhibition, it was incessant. I will not positively assert that the prussic acid stopped the vomiting, because the vomiting was sympathetic with the affection of the head. It is very possible, that by lessening the state of the head, the irritation of the stomach was lessened: still I was not sure that the treatment of the head would be successful over the stomach, and I therefore gave him prussic acid in addition. After a time his head was much better, and he thought it quite right that he should have a good allowance of meat, and a little porter into the bargain. I was sure that if these were allowed him he would soon be brought back to his former state, or, perhaps, his last state would be worse than his first; and because I would not yield to him, he marched away.

Inflammatory Dropsy.

In the same week there was a case of *inflammatory dropsy*, which presented nothing unusual, but was treated successfully in the way that you have seen many cases cured during the winter. The history of the case was precisely that which I pointed out on a former occasion, when giving a clinical lecture particularly on inflammatory dropsy. The internal affection here was both slight bronchitis, with dyspnoea and cough and sonorous rattle, and an inflammatory state of the head. He was bled, and the blood proved

buffed, but his urine was not albuminous.—After a bleeding, however, or two, the urine became albuminous; and he got perfectly well under three bleedings at the arm and good purging, first by supertartrate of potassa and jalap, and afterwards by elaterium.

The case, however, is particularly interesting on another account. After the man was nearly well, while the swelling of his ankles was decreasing daily under continued low diet and purging, he was seized with inflammation in the mouth—inflammation of the velum pendulum palati, the tonsils, and all around; and what is very curious, the tongue was implicated. The tongue in inflammatory affections of the throat is generally very foul, but here its substance became inflamed; there was not the ordinary affection of the covering of the tongue, but its *substance* became violently inflamed—there was set up a regular glossitis. The tongue swelled to so large a size that he could put nothing into his mouth, and was threatened in a very few hours with complete obstruction of it; he could scarcely breathe but by his nose. This, I believe, has been considered rather a dangerous affection, but I never saw an instance of it before; it came on almost instantaneously. There was an inflammation of the throat in the evening, and in the morning the tongue began to swell, and it swelled with such rapidity that it became globular, and excessively tense. I never saw any thing come on so rapidly, except in urticaria. In urticaria the fauces will swell when the eruption comes out, and the person may fancy he will soon be strangled. Here, however, there was nothing of the kind; nor was this a slight superficial inflammatory state, but a violent inflammation of the substance of the tongue itself.

Now we all know the great effect of incisions in what is called erysipelas phlegmonoides. When inflammation of the skin and the cellular membrane under it causes an extreme degree of tension, incisions afford almost instantaneous relief. I never had occasion, however, to practise them, because the forms of erysipelas that I see are not of this description; they more frequently fall under the hands of the surgeon. Incisions are not necessary in the ordinary cases of erysipelas; but when the tension is very great, then incisions are known to be of great use. Though I have cases of erysipelas under my care every day, I never had occasion to practise incisions: but believing their good effects in certain cases, and knowing that whenever I had plunged a lancet into a gum-boil, or an enlarged tonsil, on the supposition of the presence of matter (for you frequently cannot be satisfied as to whether there is matter or not when the gum, or a tonsil, becomes exceedingly tense), but being aware that when I had put a lancet in at a venture, which I had done often in my own case, the same relief was afforded as if I had

let out a quantity of matter—knowing, I say, these two circumstances, I determined that this man's tongue should be scarified. It may be useful to know, for the practice is not adopted commonly, that in inflammation of the tonsils passing a lancet into them in one or two places, affords very great relief. You cannot get leeches applied well, and the object is far better attained by applying a lancet than it would be by employing them. If you pass a lancet into it, the wound immediately gapes—the tension is taken off—the patient finds the greatest relief, and the tonsils will be presently reduced. It was the recollection of this that induced me to prescribe scarifications in this case. The tongue was scarified, and the relief was almost instantaneous; in a few hours the swelling of the tongue completely went off. Attempts had been made to apply leeches to the tongue, but it was so exceedingly smooth, so covered by a glary secretion, that they would not take.

You may not often meet with a case of this kind, but you will continually meet with cases of inflammation of the tonsils, and the use of plunging a lancet into them is very great. I am sure one gentleman attending this hospital will recollect the use of it when leeches outside had not effected the good we wished. Leeches externally are generally of great use, far superior to blisters, and I always employ them. He had frequently had the disease before, and the tonsils had always suppurated. I plunged a lancet into two places for him, and from that moment the disease went back; he had a good night, and he was presently cured.

The case of the man in William's ward, therefore, was interesting on account of the occurrence and successful treatment of glossitis.

A woman went out who came in with a number of nodes; but as I thought it necessary to employ mercury, she decamped two days after she came in, and, therefore, I have nothing to say respecting her case.

Paralysis.

A man went out who was admitted with *paralysis* of some of the muscles of the face and of the tongue. You may recollect that I spoke of the case before, at his admission. He was admitted into Jacob's ward with an imperfection of speech, so that he could not fully pronounce his words; there was also ptosis of the right eye-lid, and he said that he had imperfect vision of both eyes—a degree of amaurosis. He had likewise a certain degree of paralysis of the external muscles of the face, because his face was drawn to the left side. By bleeding him well, mercurializing him, and keeping him on low diet, he soon lost the paralysis of the eye-lid; his eye on the right side became as open as the other, and his face was much improved; his mind, however, was affected

—he laboured under more or less aberration; and being uxorious, wanted to go to his wife while in the hospital, and threatened to give a bloody nose to any one who should attempt to impede him. He actually did run home once or twice, but his wife brought him back. I thought for the sake of preventing him from running to his wife, that it would be best to take his clothes from him and confine him to bed, as I was sure he had sense enough not to go home naked. He was so angry, however, at the detention of his clothes, that he became unmanageable, and I sent him away.

Ichthyosis.

There were two cases presented, to which I wish particularly to draw your attention.—The one was a case of *ichthyosis*; I merely mentioned the name of the case at its admission. This is a rare affection, and I never had an opportunity of treating it before.

Thomas Swadley, *ætat* 17, came here in a state of *ichthyosis*. He said that he had had the disease four years; that he had been at sea four years; but that just before he went to sea the complaint had begun in a very slight degree. He said that he had two brothers and one sister, and that one of his brothers had the disease likewise, who was younger than himself; and that it began in the brother when three years of age. The brother is now in the hospital, and you will see him presently; he tells us that he has had the disease all his life, but it is very probable he is wrong, and that he cannot remember farther back than three years of age; and thus, having had it as long as he can remember, fancies he has always laboured under it. He is now eleven years old. They were both born at Sheerness, and have lived at Greenwich. The elder boy's skin was rough and dry, with hard thin scales of a dirty greyish, or faintly brown colour, on the extremities, and particularly on those parts where the cuticle is naturally thicker and rougher than anywhere else. The disease was very intense on the front and outside of the thighs, and the hips had it severely, but about the knees and elbows it was by far the most intense. He had it slightly, too, upon the front of the body, and there was a great deal of scurf in his head. Upon the upper part of the trunk, where the skin is smooth, the disease was the least; and there was none on his face, nor on the organs of generation.

This disease is placed among the scaly diseases by Dr. Willan, but Rayer, I think with great propriety, removes it from its collocation with lepra and psoriasis, as these are inflammatory affections. I had not read Rayer's work till lately, and I was very much pleased to find, that he has classed a vast number of diseases of the skin together under the head of inflammatory affections of the skin; because it always appeared to me, that a large number of dis-

eases of the skin were really little more than inflammations, and required very frequently anti-inflammatory treatment.—Lepra and psoriasis are continually inflammatory affections; the blood is often buffed, and the skin often more or less red, smarting, and hot; and frequently there are more inflammatory signs than these. But in *ichthyosis* there is no mark of inflammation at all. The skin is not hot, neither does it tingle, and if you take blood away it is not buffed; there is no pain in the head, no thirst, nothing that would lead you to say that there was any thing more than an organic affection of the skin; it seems to be as unconnected with the disturbance of any internal organ as corns and warts.

The disease has been described very well by Dr. Willan, and you will find it divided in Dr. Bateman's Synopsis of Cutaneous Diseases into two forms—*ichthyosis simplex*, such as occurred in this boy, and *ichthyosis cornæa*, which is far more intense. Before I read you the descriptions given by Bateman and Rayer, I will shew you the brother, who is at present in the hospital. I luckily cured the lad completely, and was anxious therefore to have the little brother here that I might, if possible, cure him also. The little one, who has had the disease now for eight years, has it as intensely as the youth who was cured and had experienced it for four years only. The elder brother complained of no thirst—no signs of inflammation; but I took away blood, in order that I might see its state, and I found it perfectly natural. He always complained of coldness, but the little brother does not. After he had been in the hospital, however, he never felt that coldness which he mentioned as having previously felt.

[The patient was here introduced and undressed, and Dr. Elliotson proceeded to remark.] He is otherwise in the most perfect health, as you see. Where the skin is naturally rough on the outer part of the thighs, the outer part of the upper extremities, and the knees, the affection is very considerable. It is like the integuments of the feet of poultry. Where the skin is naturally very smooth, you observe that it is not affected. Notwithstanding that the palms of the hands and the soles of the feet are naturally hard, they are not affected with the disease either in this or in any case. The skin here is hard enough in us all, but it is not rough, and its difference of structure, I presume, from the other parts of the body, is such as to prevent the disease; I would say that the rougher the skin is naturally, but not the harder the skin is naturally, the more do parts suffer. You see that the disease is improperly called *ichthyosis*, as Rayer remarks, because *ichthyosis* comes from the word *ἰχθῦς*, a fish. The scales here do not lie one upon another, like the scales of a fish; are not imbricated, but all stand

side by side, detached from each other. The furrow along the spine of the back is not, you see, free from disease. Yet Dr. Willan says that this is one of the parts always exempt from scales, and remarks also that the scales sometimes lie upon each other, like those of a fish, or like tiles. The description given by Bateman from Willan is very good: "The disease exhibits in its common course merely a thickened, harsh, and discoloured state of the cuticle, which appears, at a little distance, as if it were soiled with mud. (This is very accurate; you would suppose this boy's skin dirty.) When further advanced, the thickness, hardness, and roughness, become much greater (just as it is here at the knee), and of a minute warty character (that is the case in this instance), and the colour is nearly black. The roughness, which is so great as to give a sensation to the finger passing over it like the surface of a file or the roughest shagreen, is occasioned by innumerable rugged lines and points into which the surface is divided. These hard prominences being apparently elevations of the common lozenges of the cuticle, necessarily differ in their form and arrangement in different parts of the body, according to the variations of the cuticular lines, as well as in different stages and cases of the complaint. Some of them appear to be of uniform thickness from their roots upwards; while others have a short narrow neck, and broad irregular tops. The former occur where the skin, when healthy, is soft and thin; the latter where it is coarser, as about the olecranon and patella, and thence along the outside of the arms and thighs. (You observe in him that the scales are broader there than at the lower parts.) On some parts of the extremities, however, especially about the ankles, and sometimes on the trunk of the body, these excrescences are scaly, flat, and large, and occasionally imbricated, like the scales of a carp. In other cases they have appeared separate, being intersected by whitish furrows.

"This unsightly disease appears in large continuous patches, which sometimes cover the greater part of the body, except the flexures of the joints, the inner and upper part of the thighs, and the furrow along the spine. The face is seldom affected severely. The disease often commences in childhood, and even in early infancy." He adds that in the palms of the hands and soles of the feet, the cuticle is much thickened and brittle. This is not observable here, nor was it in the brother.

The disease is sometimes decidedly hereditary, and far more severe. I could not ascertain in these two cases that there had been any hereditary tendency, but it certainly has been constitutional in them. Whether the father or mother gave the children this disposition to the disease from having it themselves, or whether, if they had it, they acquired it from their progenitors, I do not know. The boys

themselves can give no account as to whether their parents ever had the affection, but, as I have just said, it is evidently constitutional in them, from its having come on in two brothers without apparent external cause. You will find a case mentioned as having occurred at Pulburgh, in Sussex, where the mother had the disease as well as one of her children, which was a female. The disease, however, is far more frequent in males than females. In the case to which I have just referred, and which you will find recorded in the ninth volume of the *Medico-Chirurgical Transactions*, it began both in the mother and the daughter when three months old.

There is or was a family living, I believe in Suffolk, whose ancestors were described many years ago, in the *Philosophical Transactions*, and by Professor Tilesius, and one of them, the grandson, I believe, of the man described, I myself saw a few years ago. He was exhibited in Bond-Street, at a shilling a piece, and the disease in him was ten thousand times more intense than in the patient you have seen to day. All the processes were really horny warts, so that on striking the nail against them, a noise was made as if you had struck some of the animals which are supplied by nature with scales or horny armour for protection. The disease covered the greatest part of this individual. If he bent the joints, or extended the parts, so as to separate the horny warts from each other, you saw their true nature—you saw them arising from the surface of the body, standing erect side by side: and in the extended position were so close to each other that one continuous surface was produced. This man said that he was constantly shedding them in summer, but particularly in winter, and that the disease had run on for four generations. Their first ancestor of whom the family had any account, he said, was an American savage. This might be to augment the wonder; for it is said, in the fourth volume of the *Philosophical Transactions*, that it appeared originally in a country labourer's child, when about two or three months old,—the grandfather, I apprehend, of this man, who, if alive, should now be forty-six years of age. It appeared regularly in all the males, but never in the females. The face and head were not affected, nor was the glans penis, nor the palms of the hands, nor soles of the feet; but all the other parts of the body.

I must pass on to the *treatment* of this disease. The brother of the lad you have seen to day was cured. I must remark, however, that Rayer says ichthyosis is seldom cured, unless it is slight and accidental. It cannot be considered as accidental here, for it has appeared in two brothers, in the one many years after the other, without any external cause, at two different times. He says that "emollient applications long continued, tepid baths, friction, and mucilaginous

and mollifying lotions, may be usefully employed, to disencumber the skin of the scales which cover it, but that is all. Some writers have recommended persons with ichthyosis, who lived at the sea-shore, to go to inland parts. Willan recommends pitch as an excellent remedy, if continued for a long time, in doses of half an ounce a day. 'By these means he assures us,' continues Rayer, 'that he not only detached the epidermic layers that covered the body, but gave it a softness that prevented the further return of the disease. More recent experience has not confirmed these results.' "Arsenic," Rayer adds, "has been given, but with such dangerous effects as to preclude its being tried again."

However, I have no reason to doubt Dr. Willan, because it is evident from his works that he was a very attentive and a very honest man, and I cannot suppose he would tell an untruth, therefore I had no hesitation in giving this patient pitch. Dr. Bateman says, "This affection has been found to be very little under the control of medicine; stimulating ointments and plaisters have been employed with no material effect; and the disorder has been known to continue for several years, with occasional variations. Dr. Willan trusted to the following palliation, by external management. When a portion of the hard scaly coating is removed, he says it is not soon produced again. The easiest mode of removing the scales, is to pick them off carefully with the nails from any part of the body while it is immersed in hot water. The layer of cuticle which remains after this operation, is harsh and dry, and the skin did not, in the cases I have noticed, recover its usual texture and softness; but the formation of the scales was prevented by a frequent use of the warm bath, with a moderate friction. I have known, (continues Dr. Bateman) the skin cleared of this harsh eruption by bathing in the sulphureous waters, and rubbing it with a flannel, or rough cloth, after it had been softened by the bath; but the cuticle underneath did not recover its usual condition; it remained bright and shining, and the eruption recurred. Internally the use of pitch has in some instances been beneficial, having occasioned the rough cuticle to crack and fall off, and left a sound skin underneath. This medicine, made into pills with flour, or any farinaceous powder, may be taken to a great extent, not only without injury, *but with advantage to the general health*, and affords one of the most effectual means of controlling the languid circulation, and the inert and arid condition of the skin." Then there is a note: "a lady took, for a considerable time, from three drachms to half an ounce of pitch daily, with the most salutary effect, both on her skin and general health. She had commenced with four pills, of five grains each, three times a-day, and gradually augmented the dose."

Now it is very evident that, in the treatment of this disease, it would be right to soften the skin; and I therefore ordered the patient a hot bath every day. I also, in order to procure a constant effect of this kind, had him oiled regularly after he came out of the bath. He was treated like an ancient Roman, and properly anointed. He rubbed himself all over with common sweet oil twice a day, after he came out of the bath. I employed no medicated waters nor complicated ointments; but plain water and common oil. He began at the same time with pitch, commencing with a dose of ten grains three times a-day, which was every day or two increased till he took *ten scruples* three times a-day—that is to say, two pills at first of five grains each, three times a-day, and at last *forty such pills* three times a-day. He was admitted on the 2d of December, and had laboured under the disease four years—but in a very short time a great improvement was manifest; the skin was less rough, and on the 13th January I presented him perfectly well to all appearance. The skin had become as *soft and smooth as that of a girl*, and there remained *not a vestige* of the disease; it was far softer, I am sure, than my own skin. When he went out, I supplied him with a good quantity of pitch and oil—to pitch himself within and oil himself without for some time, lest the disease should return—and he went away. I had him from the first clothed universally in flannel, and told him not to wipe off the oil after he was anointed; so that he was living in a constant state of grease. He wore the same flannel waistcoat, drawers, and worsted stockings, constantly.

Now it is impossible for me to say whether it was the emollient treatment or the exhibition of the pitch that cured him; but between the two the result was what I have stated. He was, in fact, well for a fortnight before I dismissed him—well in the beginning of January—at the end of a month; and this was undoubtedly a rapid cure. He was admitted on the 2d of December, and I think I may say he was well on the 2d of January; at any rate he was so on the 13th of January.

With respect to the pitch, it had no sensible effect upon him; his bowels remained the same as they were before. I inspected his motions, and there was no appearance of pitch in them, nor had they any smell of that description. In regard to Dr. Willan's testimony I may mention, that, in going round, a gentleman informed me that he knew a lady with this disease who was attended by Dr. Willan, and took as much as nearly an ounce of pitch daily, and got quite well. Since that time, another gentleman has told me that he also knew a patient who was attended by Dr. Willan, who took pitch to the same extent, and likewise got perfectly well. Therefore it is possible that the pitch cured this boy, and not the inunction;

but I think the inunction must have had a considerable effect, on account of the rapidity of the cure. It is not said, either by Dr. Willan or Dr. Bateman, that a cure was effected rapidly; and if it had been the case, it undoubtedly would have been mentioned: but here the cure was so rapid that I am much inclined to suppose that the inunction had an effect upon the disease. On the other hand, it may be urged that the quantity of pitch taken was much larger than in Dr. Willan's cases during the same period. For the purpose of being able to draw an inference, I am treating the present boy with only one part of the plan—he is merely taking pitch. I do not oil him, nor send him to the hot bath; I only pitch him, because it is an object to know what it is that has the effect. The hot bath could have little or no share in the cure, because, having rubbed off the skin of his legs and shins, he found the bath make them smart, and did not use it after the first ten days.

It is said that half an ounce of pitch should be taken in the course of the day; but as I found the thing so innocuous, and the disease not likely to give way, I went on increasing it all the time till the quantity amounted to ten scruples three times a-day—thirty scruples a-day. Three scruples make a drachm, and eight drachms an ounce; so that he took an ounce and a quarter a-day with no inconvenience. The only difficulty I expected was in swallowing the pills, but he swallowed them twenty at a time like large marrowfat peas. The boy now in the hospital has no difficulty in swallowing them either. I began with four at a time, and they will be gradually increased to the same extent as in his brother's case. It is possible that, in the first case, the cure was owing to the quantity of pitch I gave; but the practice adopted will be carefully analysed, and we must wait the event.

As to swallowing pills, I may remark, that when patients have a difficulty in swallowing them, you may generally enable them to do so by making them chew a biscuit, or a piece of bread, and when their mouth is full of the pap, and they ready to swallow it, by plunging the pill into the pap, all is swallowed together. I can take six or eight at a time in that way, though one pill thrown into my throat excites more nausea and torment to me than the filthiest draught.

Chorea.

There was a case presented of *St. Vitus's dance*, which occurred in a girl, and was cured under the exhibition of iron. I have not time to speak at length upon the case, and will therefore merely point it out. It was in Mary's ward, and the case was interesting on account of its previous long continuance. She had had the disease two years, and was fourteen years of age; it was confined almost to the left side. She

took merely the subcarbonate of iron, in doses of two drachms three times a-day, and the dose was not increased. She was admitted on the 25th November, and was perfectly well in the beginning of January, so that she could do needle-work, but I detained her till the 13th of the month, when she went away, with an allowance of this remedy, apparently cured.

I have not yet failed in curing a single case of this disease with this remedy. It is to be remembered, however, that many cases of this disease will cease of themselves, after a certain time; but this is frequently not till after a long period—perhaps a lapse of many months. In this patient it had existed two years. I have now and then, in obstinate cases, been obliged to give the remedy for twelve weeks, but, by perseverance, never yet failed. The girl, in about a fortnight after she commenced with it, was better, and eventually got quite well. She was now able to do needle-work, which is one of the greatest signs of improvement, on account of the difficulty there must be in this disease to thread a needle, or use it. No aperients were given her, and she took the ordinary diet of the house. No inflammation was present, and therefore she was not put on low diet, and her bowels were allowed to take their own course. She had her motions after beginning the remedy just as before she came into the house; and such was the result.

There is at this moment another case, in a boy, who is going through the same treatment, and improving rapidly. A degree of idiocy was expressed in his countenance when he first came in, but I have no doubt he will be perfectly cured, and I will speak particularly of the disease when he is presented.

Porrigo Decalvans.

There were eight patients admitted last week, among whom were three females: one with hypertrophy and dilatation of the left ventricle of the heart, with a difficulty in the transmission of the blood from the left ventricle, so that there is a bellows-sound, and indeed a sawing sound, at its action. There was likewise a case of rheumatism, and a case of what is called *porrigo decalvans*, which I will now shew you.

The affection is seated in the roots of the hair, and occurs generally in circular patches, which become bald, and enlarge till they spread over the greater part of the head. You observe that the skin is perfectly pale and smooth; when the hair has fallen off, it is even said to be paler and smoother than in other parts;—no shaver could have accomplished any thing like it. There is no sign of disease except a falling off of the hair. Rayer objects to the title of *porrigo decalvans*, because there is no *porrigo*—there are no pustules, no vesicles, no redness even, nor roughness of the skin, but an

absolute smoothness; and he therefore does not class this *porrigo decalvans* with other inflammatory affections of the skin, but arranges it with diseases of the appendages of the skin. *Porrito*, too, is a contagious disease, but it does not appear that this is by any means contagious.

[In answer to questions addressed to her by Dr. Elliotson, the child said that she had slept with her sisters, but none of them had the disease. She had been troubled with it three months. She had been to school, but none of the other children there had the affection.]

I will speak particularly of the affection afterwards, and therefore I will merely remark, that, in this little girl, very visible signs of internal affection of the head are noticed, and are well worthy of your attention. She has *drowsiness*, occasional *pain* of the upper central part of the occiput, and *pain* also in the frontal region, and is sometimes so *confused* that she appears *lost*. This is a circumstance that I did not expect. I have been surprised to see the head so frequently affected in various chronic cutaneous diseases, but I could not have supposed that there would be internal affection in such a case as this; but such is the fact. She has not only heat of head, but occasionally she has also vertigo, and would fall down sometimes if she were not supported. Her bowels are open but every other day, and she sleeps so soundly that she snores like an old man. The disease began over the left parietal bone, and has extended as far as you see it; more than half of the head is bald. On account of the internal state of the head I took six ounces of blood from her; but it was not buffed. The internal symptoms, however, of which she complained, lessened immediately; she has been less giddy, and much more comfortable in her head.

Five males were admitted: one with erysipelas; one with gastrodynia and enterodynia, arising probably from stricture in the rectum; the boy with ichthyosis; and one of sea scurvy, which I will now show you. You will perhaps never see one again. The disease will be cured most probably before the next lecture. Over the lower part, inside of the thighs just above the knees, you feel the hardness of a board, and see very large ecchymoses, as though he had been bruised. There are petechiæ, livid spots all over the rest of the lower extremities.

Now this may be considered a chemical disease; there is no fault at all in the organs or functions; they are all ready to do their duty if proper chemical materials are given them to work up. He has had unwholesome food, nothing but salt meat for seventeen weeks. He requires no medicine, nothing but proper food—a proper supply of chemical materials. He has fresh meat every day, and greens twice a-day, and is making

very rapid progress towards a cure. If the case had been more severe than it is, or I had any fear of not curing it speedily, I would give him lemon juice into the bargain. His gums have been affected, and bled a great deal, he supposes to the extent of a pint in the whole; he had to go out for some clean linen as soon as he was admitted, and the ecchymoses were doubled instantly, from the use he made of the thighs; the hardness also was greatly increased, and he became quite lame. I will detail the whole case when it is presented.

A case of lepra, or psoriasis guttata, was also admitted. I may just remark, that I inquired into the state of this man's head, and he said there was nothing the matter with it. In a day or two, however, he told me that he had of late experienced a great want of recollection; that since the disease began he found his memory was much impaired. This was, of course, a cerebral affection, and the circumstance of his not mentioning it was a proof of the thing itself; he *forgot* that he had *lost his memory*. He was bled, and directly felt better.

EXTIRPATION OF THE UTERUS.

To the Editor of the London Medical Gazette.

Monday Evening.

WITH compliments to the Editor of the Medical Gazette, Dr. Blundell will thank him to correct, in a conspicuous part of the next Gazette, the title of the case of Uterine Extirpation. It ought to run thus:—"By D. Evans, Esq. Surgeon, Belper, Derbyshire." It was merely communicated by Dr. Calvert and Dr. Blundell.

[It had escaped the Doctor, when he sent the paper, to mention the above circumstance.—E. G.]

NOTICE.

The paper from Ashby-de-la-Zouch cannot be inserted. Various others in our next.

ERRATA.

In Dr. Hayeraft's paper, p. 590, l. 29 from bottom, for "rushes into the auricles," read "rushes into the ventricles."

P. 591, l. 7 from top, for "the completion of the diastole coincides with the second sound, &c." read "the completion of the diastole" coincides, &c. Also, l. 11 from top, for the ventricles remain quiescent, &c." read "the ventricles remain quiescent, &c." Also, l. 20 from top, after the word "through," add "the interval which intervenes between."

P. 592, l. 23 from bottom, for "the diastole occurs after the first sound," read "the diastole occurs after the second sound." Same page, c. 2, l. 21 from top, for "this is literally legerdemain," read "this is a literary legerdemain."

P. 593, l. 10 from bottom, for "heart," read "ventricle."

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

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Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 19, 1831.

CLINICAL LECTURE,

DELIVERED BY DR. ELLIOTSON,

January 24, 1831.

*Terminations of various Cases—Sea-Scurvy—
Pregnancy—Necessity of careful Examination in Enlargements of the Abdomen.*

OF the cases which were presented last week, gentlemen, one was of so much more importance than the rest, on account of its rarity, that I shall devote the chief part of the lecture this morning to its consideration, and consequently speak in the most cursory manner of the others. The case to which I allude was that of *scurvy*, which I shewed you in this theatre on Monday last.

Respecting the other cases, I will briefly mention that they were, I believe, seven in number. Three of them were cases of *rheumatism*; two of them of that peculiar state of the system which is seen after syphilis and the exhibition of mercury, and which some call *mercurial disease*, and others *pseudo-syphilis*—a state which is not well understood, and the treatment of which is by no means satisfactory, though many practitioners place the greatest reliance in the exhibition of sarsaparilla.

There was also presented the case of *impetigo* of the hands, of which I spoke fully when the patient was admitted*, for the purpose of drawing your attention to the diagnosis between it and pustular itch. I told you that the treatment would be simply anti-inflammatory. The patient was put on low diet, underwent two or three bleedings; cold was applied, and also the oxyde of zinc, and she went out with her hands perfectly well. I have no doubt that if I had not bled her, local applications would have

been of no use. I told you she would be cured, and the result answered my expectations.

The case, too, of *remittent fever*, which was becoming continued fever, and in which I gave salicina, did perfectly well*.

There were two cases of *chronic bronchitis*, one of which went out well, and the other proved fatal. No disease is more unpleasant to treat than chronic bronchitis. When you consider the vast extent of mucous membrane that is affected when the entire tubes are diseased, (in the case that proved fatal there was not a tube but what was diseased) when you consider the extent of surface there must be, and when you recollect how difficult it is to cure a chronic affection of so limited a mucous membrane as the urethra—how obstinate leucorrhœa in a female, and gleet in a male, often prove, you may well imagine that an affection of the bronchiæ must offer the greatest resistance to medical means, more particularly when you remember that the part is constantly exposed to the admission of cold air, and air of variable temperature. Under these circumstances, unless we could change the climate, or obtain a perpetual summer here, we can hardly expect to do much good.

That every part of the tubes was affected, was proved from the circumstance of the patient having sonorous and sibilous rattle in every part of the chest to which the stethoscope was applied, till at last the case resembled phthisis, and no one without auscultation could have said that it was not phthisis. He spit a vast quantity of fluid of a yellow kind, apparently pus; he was emaciated, and coughed, looking, excepting that the ends of the fingers were not enlarged—and which is not a universal occurrence in consumption—exactly like a person in phthisis. There was, however, no pectoriloquy observed, nor cavernous respiration, nor gurgling rattle—nothing but

* Med. Gaz. No. 163, Jan. 15.

* Med. Gazette, No. 163, Jan. 15.

signs of chronic bronchitis. A case of erysipelas of the head also proved fatal: the patient had not come to the hospital till the eighth day of the disease.

I proceed however to consider the case of

Sea-Scurvy.

Robert Haynes, æt. 25, was admitted on the 13th inst. with scurvy. He said he had been ill a month, that he had thirt morning landed, that he had been seventeen weeks on his passage, in the *Lavinia*, of London, from Buenos Ayres; that they had had salt beef and salt pork all the passage, together with bread; that two pigs were killed, one of them so recently as Christmas-day, when he was too ill to eat any; that there were thirteen of them to eat of the first pig, which was a very little one, and each got but a mouthful; so that we may almost say he had no fresh meat at all for seventeen weeks. They had no lemon-juice on board, nor citric acid; no doctor, nor any medicine of any kind.

His appearance you saw last Monday. There were petechiæ on different parts of his body, particularly on his legs; purple spots, spots either purple or of a very dingy red, down his thighs and legs. You observed that on the inner and lower part of his thighs there were large ecchymoses, large black and blue patches, as though he had been severely bruised. You observed likewise that there was considerable hardness there, so that the inside of his thighs felt as hard as a board. His gums were but slightly affected. The fact I believe was, that he was much better already before he came into the hospital. He said that his breath had been very offensive, and that his gums had been so severely affected that he must have lost altogether a pint of blood from them. He felt exceedingly weak, and his spirits were very much depressed. He had had fresh meat since his arrival in the *Downs*, about a week before, and consequently improved very considerably.

The day he was admitted he had to go out to make some arrangements, and was obliged to walk some way; and on the following day, through the effort of walking, the insides of his thighs were far more ecchymosed than before; there was treble the number of patches; in fact, the inside of his thighs was little more than one great ecchymosis, and the hardness too had very considerably increased. The stiffness had become so great that he was obliged to walk with his knees bent: he was perfectly lame, and unable to stand upright on his legs.

Now the usual symptoms of scurvy, as you find them described in books, are petechiæ, vibices, and ecchymoses, purple spots of various sizes, from those of pins' points to large patches—petechiæ being the most minute, vibices larger, and ecchymoses of the size of

bruises, and all of a dark colour, of either a dark red or an absolute purple. You will find it likewise mentioned, that in severe cases there is always hardness of the thighs, and the whole of the surface is swollen, so that a person looks unhealthy and bloated. It is also said, that if you look at the gums you will find them spongy; that they bleed, and the teeth fall out. I did not put it down in the case-book, but this man's teeth were loose; you could move several of them about in his mouth, and they had all been quite loose.

The gums are sometimes exceedingly swollen, and assume quite a fungus appearance. I recollect distinctly seeing, when a pupil, a man with scurvy, who had been to one medical man who had taken out several of his teeth for him, and to another—a very eminent man—who told him that it was a case of fungus hæmatodes of the gums. Now all this arose from the disease being so exceedingly rare that neither had seen it: many surgeons even in the navy have never witnessed this disease. It is, therefore, particularly necessary that I should direct your attention to this case, because, although many of you may never see another case during the whole of your lives, yet some of you may meet with a case of it, and if you had not seen an instance of it, might mistake the case, and treat it by pulling out teeth, or despair of doing any good at all, and let the patient die, whereas it may be cured with the greatest ease. It is on this account that I consider the present case the most important of the set.

There are also mentioned in books, depression of spirits, general weakness of body, and absolute fainting. There is such debility that persons cannot get out of bed, and the least effort will make them faint. The pulse, as you will suppose, under these circumstances is feeble. This man was low spirited, weak, and faint, and his pulse feeble, and the surface of his body cold. It frequently happens that there are ulcers on the surface of the body, and these discharge a thin, fætid, bloody fluid. The discharge from them is fætid like the breath, and like the discharge from the gums, and at last what was a bloody fluid becomes, both in the gums and the ulcers, real coagulated blood, which is separated with considerable difficulty; and the flesh under the coagulated blood which you remove is dark, soft, and spongy; for the solids of the body as well as the fluids become affected, and if you remove the coagulum, it is instantly renewed; as fast as you take one away another is formed, and at length a fungus sprouts forth, which will spring up as fast as you cut it away; just as in the case of a fungus of the brain after an injury of the head. When the cranium has been fractured, the fungus which may sprout up is reproduced as fast as it is removed. The fungus is called, in the case

of scurvy, by sailors, *bullock's liver*, from its resemblance, I suppose, to the part of the body so named; and some of these morbid growths attain a monstrous size. If you repress them by pressure, a gangrenous tendency is induced; the limb will swell and grow spotted and painful, and mischief is produced. You know, too, that in the case of a fungus of the brain, if it be compressed carelessly, without due precaution, comatose symptoms will come on, which are, perhaps, followed by death. So with respect to the fungus in scurvy, if you compress it you give a tendency to gangrene; you produce a swelling of the limbs, and they grow much more spotted than before.

Any bruise in a person labouring under scurvy may become an ulcer, and when an ulcer is produced, it assumes the same character as that which I have already described. Old wounds in this disease will break out a fresh, shewing that those parts of the body which have been repaired are still the weakest. Indeed, not only wounds break out afresh, but even the callus of bones, wherever they have been broken, will soften down, and a solution of continuity again occur.

A very extraordinary symptom sometimes takes place in this affection, which you might not be prepared to expect—that is, night blindness, *nyctalopia*. This is noticed and spoken of by Mr. Bamfield, who practised in hot countries. Sir Gilbert Blane has likewise mentioned it.

Respecting the *causes* of this disease, the case of the patient before us fully illustrates that point, as well as the symptoms of the affection. It is always, I believe, a want of fresh animal and fresh vegetable food; consequently it was formerly very common at sea, where there were not fresh but salt provisions, and bad management. So great was the havoc of this disease in former times, that Lord Anson, in the year 1741, lost one-half of his crew by it in six months: 961 men sailed with him, only 335 of whom were alive at the end of the year; and at the end of the second year, 71 only were fit for the least duty—not to say duty, but for the *least* duty. Formerly the deaths were so common as to amount to eight or ten every day in a moderate ship's company, and bodies sewn up in hammocks lay washed about upon deck, there not being strength and spirit on the part of the miserable survivors to cast them overboard. Formerly, too, the disease was prevalent in London, so that in the seventeenth century from fifty to ninety deaths occurred from it annually. In the year of the plague, 105 deaths took place from it in London. I might also give you another instance of its former prevalence in the navy. In the year 1726, Admiral Hosier sailed with seven ships to the West

Indies, and he hurried his ship's company twice, and died himself of a broken heart.

You will find in Roderick Random, and in Smollett's History of England, a good account of the mode in which sailors were formerly supplied with food. Smollett gives an account of the armament which was fitted out to Carthagea about the same time that Lord Anson made his voyage. He says that the provision consisted of *putrid salt beef*, to which the sailors gave the name of *Irish horses* (I suppose the contractors lived in Ireland, and it looked like horse-flesh), *salt pork*, and *musty bread*. The salt pork came from New England, and was neither fish nor flesh, but savoured of both. The bread came from the same country, and the biscuit, like a piece of clock-work, moved by its own internal impulse, occasioned by myriads of insects that dwelt within it; the butter was served out by the gill, and was exactly like train oil thickened with salt. You cannot wonder, therefore, that the men had the scurvy. He also adds, to shew the bad management, that, though there was water enough to allow each man half a gallon daily for six months, yet each had only a purser's quart a-day in the torrid zone, where a gallon would have been hardly enough to repair the waste of perspiration.

With respect to the cause of scurvy formerly in England:—in former days, the food of the common people in this country was very different from what it is now: they lived upon salt beef and salt pork, with veal. The lower orders had very little else in the time of Henry VIII. Pasture land then only was common, and very little was cultivated; even hay was not made then as at present, that being a later improvement. The consequence of all this was, that the cattle were killed as soon as fattened, or ready for killing, and salted. Beef and pork were salted, and put up as a provision for the winter. There were no means of supporting the cattle after the grass season was over, and therefore every thing was killed at the beginning of the winter, and the people lived on the meat so killed and salted. In those days, too, there was scarcely any garden-stuff, for in the year 1700 a cabbage cost three-pence, which in the year 1760 cost only one halfpenny. Other greens were proportionally dear, and garden-stuff was used then only on Sundays, or as a great rarity when people had company. Catherine of Arragon, one of the numerous wives of Henry VIII. of blessed memory, in the beginning of the sixteenth century, had a gardener sent for from the Netherlands to raise her a sallad, there not being a man in England who understood such a matter. It is also said, that, in the time of Henry VIII., the price of salt meat was fixed at one-twentieth of what it is now, and wheat at

only one-tenth. The price was fixed by law, and could not be raised higher; because salt meat formed the chief food of the people, and the attention of government was directed chiefly to it, in order to afford them a cheap living.

However it is not the salt meat that produces the scurvy, nor is it putrid meat: the utmost quantity of salt will not produce it; and the scurvy will occur where there is no salt meat eaten, nor any meat at all. It is not this kind of food which causes the scurvy, but it is the want of other food; the want of fresh animal and fresh vegetable food: for persons will have the scurvy if they are not provided with fresh meat or vegetables, although they eat no meat at all. You will find, in the *Transactions of the College of Physicians*, vol. ii. two cases mentioned by Sir Francis Milman, of women that had the scurvy in the country (I think in Derbyshire), but who had eaten no meat whatever, having lived on tea and bread, after being accustomed to better food. I myself had a poor man in the hospital with scurvy, in January 1823, who had fallen from good circumstances into the most abject poverty, and lived on tea and gruel for some time. I may remark that sea and land scurvy are the same, though once considered different. Many cases of that kind I might refer to—so many persons have had the scurvy who had eaten no salt meat, nor any putrid meat, but merely been in a state bordering upon starvation.

It is also mentioned by writers, that the scurvy was not only common in London, as you will suppose from the food I have mentioned; but in a work published by Dr. Musgrave on the gout, in 1703, it is said to have been common in Somersetshire; and we read in Pliny that it prevailed in the Roman armies when in Germany, and in the armies which served in the wars impiously called, like some other things, holy.

Although the want of fresh animal and fresh vegetable food appears to be the cause of the disease, yet many other circumstances increase the tendency to it. Cold, and a want of exercise, considerably predispose to it, as is proved by the fact that sailors will suffer from it in cold climates under the very same circumstances in which they escape in warm climates. Then, with respect to the want of exercise, Captain Cook says that the people in Kamschatska, who are habituated to hard labour, never have the scurvy, while the Russian and Cossack in garrison, and living in indolence, are subject to it. Sir Gilbert Blane remarks, that the prime seamen only were attacked with scurvy, who were exempted from pumping. He alludes to a particular ship's crew, and says, the prime seamen suffered the disease, whereas, those who were obliged to work hard at the pump from time to time, the ship having

proved leaky, escaped. The disease was first particularly noticed, I have read, in the men of Vasco di Gama, in 1497.

The difference between ships' crews now and formerly, is very striking. In regard to the two accounts of Lord Anson's voyage and that by Captain Cook, we read, that while the former suffered in the way I have mentioned, the latter in going round the world experienced nothing of it, for they had a good supply of portable soup, sour crout, and fresh meat; he also kept his seamen in regular exercise, and extreme cleanliness and ventilation were observed. In addition to this they were only about three weeks out on their longest cruise, although absent so long.

The remedy for this state is fresh food, vegetable and animal, and particularly lemon juice. With respect to the man whose case I have been considering, I gave him no medicine; the case was not so severe but that I felt satisfied that a change to healthy diet would entirely cure him; and if I had given him lemon juice, no inference could have been drawn as to its virtues, because, of course, it was my duty to give him proper food.

Scurvy is a disease, if any affection is, truly chemical. The bodily structure and functions are in one sense not the least in fault; each part is ready to perform all its functions, but one external thing requisite for its doing so is absent. In the case of suffocation the body is not in fault, but it suffers from a want of fresh air; so in the case of scurvy, the structure of the body is right, and the functions would be all perfectly performed, but the food which the nature of the body requires is withheld from it. Give the body this proper food, and it will make a proper use of it—give it a good raw article, if I may so speak, and it will manufacture properly, and the diseased state will disappear. This is very different from the case of some other diseases in which chemical remedies have been employed. You are aware that, in the case of softness of the bones, some have recommended a good supply of the phosphate of lime, as though the want of that were the cause of the disease. The disease does not consist in a want of bone, but in the want of the proper function which makes the bone, or secretes it from the materials received; so with respect to diabetes, it is not that the body is overloaded with sugar, or deprived of a due portion of animal food, that occasions diabetes, in which sugar appears in the urine, and lithic acid, salts, and urea, are more or less deficient, but that the functions of the body, which secrete the fluid called urine, are diseased; and should you keep a person to animal diet exclusively (if you can), you will very rarely, I believe, by that means cure the diabetes. You may assist him somewhat, by making it more difficult for the diseased function to manufacture

sugar, and the peculiar urine, but as to curing the disease by animal diet, that is in general, I believe, impossible, at least I have found it impossible. To take a chemical view of such affections, is not contended by chemists themselves. But the case of scurvy is very different; scurvy bears an exact analogy to the case of impending suffocation. The body would be in good health if not deprived of its proper external supply. I therefore gave this man fresh diet, and he at once became well; fresh meat every day, and greens twice a-day, for farinaceous food is insufficient. His improvement was visible every day; and, in fact, in four or five days after he was shewn to you, he felt so well that he would not stay in the hospital any longer, but determined to lose no time in going into the country, to visit his friends, whom he had not yet seen, being satisfied that he had nothing to do but live out of the hospital as he had done in, in order perfectly to get rid of the remains of his complaint.

The power of lemon juice, however, over this disease is said to be very great; its effects speedy and marvellous. The compiler of Lord Anson's voyage, seeing the dreadful appearance of the body in this disease—seeing how fatal the disease was, and how horribly it disfigured and disabled the body, making it a loathsome mass of corrupt on, more so, perhaps, than any other disease whatever, said, that a cure seemed impossible by any remedy, or by any management that could be employed, and no hope of ever curing it could be entertained; and yet now we know that such a state as this may be at once removed by a change of diet, and by a little lemon juice! This circumstance, I confess, gives me great hope of the improvement of our profession. Many diseases may certainly be cured now which were formerly thought hopeless, from our sounder pathological views. By looking out particularly for inflammation, and by treating it vigorously and steadily, we cure many such cases as formerly were despaired of; for inflammation is now known to be the foundation of numerous diseases. No doubt, too, a number of drugs, mineral and vegetable, have a greater power over diseased conditions of the body than is yet known. I consider the marvellous effect of lemon juice in this, the most horrid state of the body that can well be conceived, sufficient to justify a hope, that a number of drugs will be discovered in the course of time that will cure diseases which even at present appear to be hopeless. Let me again mention, that formerly scurvy appeared entirely incurable, and the attempt to cure it absolutely ridiculous.

The power of lemon juice in this affection is said to have been known 200 years ago. It is said to have been mentioned in a book called Woodall's Surgeon's Mate, or Military and Domestic Medicine, by John Wood-

all, Master in Surgery, which was published in 1636; and he ends his praise of it by saying, that he dare not write how good a sauce it was with meat, lest the chief in the cabin should waste it to save vinegar. It is said even to have been mentioned still earlier, in Purchas's Pilgrim, published in 1600; and yet, notwithstanding that, it appears to have been almost forgotten. This is a very instructive circumstance in our profession; it teaches us that we are not to despise a remedy without very good reason. If a medicine is recommended on good authority, we are bound, be the authority old or new, to ascertain whether what is said of it be true, unless we have other medicines that fully answer every purpose. Many medicines, I have no doubt, were formerly employed, and are now forgotten, which are very good in certain cases, or certain states of cases, and have been thrown aside without any reason whatever. That was the case with colchicum. When I was a pupil colchicum was not employed, at least I never saw it used; it is true I heard it mentioned in lectures, but it was always spoken of as a remedy highly dangerous and uncertain, and not worth employing; and yet it is as old a medicine as any in the pharmacopœia, and is praised by very old writers for its power of cleansing the joints—in short, for its power in gout and rheumatism.

Now lemon juice was so little known as a remedy in scurvy in the last century, though so well appreciated long before, that Sir Gilbert Blane states (and his Select Dissertations, and indeed all his writings, are full of excellent information) that, when the London College of Physicians were applied to by Government for a remedy in the scurvy, they advised vinegar, which has very little power over the disease; and that, in the year 1753, a Fellow of the College wrote a book on the subject of scurvy, and never once adverted to lemon juice. It was owing to Dr. Lind chiefly that the knowledge of its utility was revived; above a century after Woodall wrote he stated its particular power. The navy, however, continued to suffer severely till 1795, when Earl Spencer, the father of the present Chancellor of the Exchequer, was at the head of the Admiralty, and he, at the recommendation of Dr. Blair and Sir Gilbert Blane, established a full supply of it in the navy; and from that time scurvy has scarcely been known. Such has been the decrease in the disease, that, although in the year 1780—so late as that, nearly two centuries after the publication of Purchas's Pilgrim—there were 1754 cases of scurvy in Haslar Hospital; in 1806 there was but 1, and in 1807 but 1!

I believe that the lemon juice itself is considered more efficacious than citric acid; I, of course, can speak from no experience of my own, but this is the opinion. Lemon

juice is best preserved, I believe, by adding about one-tenth part of spirit to it. All the hesperidæi have the same virtue—the lime, the Seville and unripe China orange; malt and sour crout are also thought good. An ounce of lemon juice, with one ounce and a half of sugar daily, is the navy allowance, and scurvy now is never known even in long voyages, unless in an instance of gross neglect, such as that of the man whose case I have now considered. During the nine years previous to this supply, the average number of sick sent to the hospitals was one-third of the whole navy; in the succeeding nine years but thirty-four cases occurred. I may mention as a good illustration of the power of lemon juice, that the Suffolk left England in April 1794, and had no communication with land for twenty-four weeks and a day, and yet all the time she had only fifteen sick, and those slightly, and soon cured by an augmentation of the usual allowance of two-thirds of an ounce; and at her arrival not one had had the scurvy. In 1800 the channel fleet had no fresh provisions for sixteen weeks, but plenty of lemon juice, and not a single instance of scurvy occurred; whereas, in 1703, the channel fleet could not keep at sea beyond ten weeks, and was worn out with scurvy and fever.

The best application to the ulcers is also lemon juice—a slice of lemon, as Père Lebat appears to have pointed out in his Voyage to the Antilles. Pain in the breast and limbs is often felt during the scurvy, especially, it is said, if rapidly cured by lemon juice.

In 1600, on the 2d of April, Commodore Lancaster sailed from England with three other ships for the Cape of Good Hope, and arrived at Saldanha Bay on the 1st of August, the commodore's own ship being kept in perfect health by the administration of three table spoonfuls of lemon juice every morning to each of his men; whereas the other ships were so sickly as to be unmanageable for want of hands, and the commodore was obliged to send his own men on board to take in their sails and hoist out their boats.

With respect to the time at which scurvy begins, I think it commenced in this man at the end of about five or six weeks, but not having made a note of it, I cannot speak very positively. Sir Gilbert Blanc, to whom I (and Mr. Herschel, indeed, evidently also) am much indebted for information on this subject, says that the disease usually begins on the sixth or seventh week of sea victualling.

Some have of late doubted whether lemon juice has the power ascribed it. A friend of mine, a most excellent man, Dr. Stevens—the gentleman who first tied the external iliac artery in the West Indies—has some peculiar opinions respecting fever, and contends that the blood is in a diseased state

in fever, and deficient in saline substances, and that after a time the proper treatment is to give certain substances which will remedy this condition of the blood. He gives minute and frequent doses of neutral salts, and according to his account (and all his statements are to be depended upon) life is thus saved in the yellow and other fevers after the first inflammatory attack is over, and when the blood has fallen into this depraved condition. I have seen in his experiments neutral salts render the blood very florid out of the body, and acids make it black. He contends, therefore, that acids must be improper in scurvy, and lemon juice among the rest, and advises nitre, a neutral salt; and says, that all the benefit now experienced in the navy is owing to the good regimen adopted, and the proper supply of food which is afforded. I must say, however, that while we have so many facts of ships' crews being without fresh food for so many weeks, and yet under the exhibition of lemon juice, remaining free from scurvy, and contrast these facts with the prevalence of that disease when lemon juice was not employed, I think stronger evidence will be required before we can doubt its efficacy. But his work on the subject of Fever will be well worth your perusal, and you will be able to judge for yourselves.

In Mr. Herschel's work, just published in Dr. Lardner's Cyclopædia, on the cultivation of the Physical Sciences, he mentions among the great improvements which have been introduced for the good of society, the cessation of scurvy. He mentions it as one of the greatest blessings which has been accomplished for mankind in modern times. You will find him say that "at present the scurvy is almost completely eradicated in the navy, partly no doubt from an increased and increasing attention to general cleanliness, comfort, and diet, but mainly from the constant use of a simple and palatable beverage—the acid of lemon, served out in daily rations..... If (he adds) the gratitude of mankind be allowed on all hands to be the just meed of the philosophic physician, to whose discernment in seizing, and perseverance in forcing it on public notice, we owe the great safeguard of infantile life, it ought not to be denied to those whose skill and discrimination have thus strengthened the sinews of our most powerful arm, and obliterated one of the darkest features in one of the most glorious of all professions."

In regard to the etymology of the word *scorbutus*, I believe it is *scharbock* corrupted and latinized, and that *scharbock* itself comes from *scharf-pocke*, sharp or violent pock; or *schorf-pocke*, scab or scurf-pock. Though scurvy is the medical English name, for the disease, *scorbutus*, common people designate any cutaneous disease with scurf or scabs by the term *scurvy*. You may remember

that when I desired the sister of the ward to bring the man with the scurvy, she brought the man with the leprosy, assuring me that he was the man with the scurvy, and had no idea of the sailor's disease being called scurvy.

Pregnancy—Necessity of scrutinizing suspicious Enlargements of the Abdomen.

Respecting the cases that were admitted this week, there were five among the women and three among the men.

Among the women a case of continued fever, a case of rheumatism, a case of bronchitis, and a case of hysteritis. Among the men a case of nephritis and two cases of bronchitis. Among the women there was also admitted a case of pregnancy! When I came to the hospital on Thursday, I found one of my beds appropriated to a young woman with a large abdomen, who said that her doctor—Dr. Fiddle, had told her she had got the dropsy, and had better come here to be cured.

Now when I was a pupil I saw a very sharp clever man admit two cases of women with big bellies, and prescribe for them squills, acetate of potash, and other antihydropsics; and before the week was out each of these persons had a little one sucking at her side. However this would have been a very disagreeable and discreditable circumstance now, in these days of diagnosis, and therefore I condescended (or my physician-ship condescended) in the case of this patient to use mechanical means for the purpose of investigating her state; and I not only inquired whether there was fluctuation or not, as physicians are allowed to do, and ascertained that there was none, but I had her undressed, as I make it a rule in all cases of affections of the trunk, whenever there is a suspicion of organic disease. I believe it is considered by some to be derogatory to the dignity of a physician to use his hands or his ears; but as nature has given us both ears and hands, for one I am very grateful for the gift, and whenever the phenomena of touch or sound occur, I consider them equally worthy of notice as phenomena of sight, or as details given, and despise not the assistance afforded me by the Creator. I therefore mechanically examined the whole abdomen of this young lady, and found there was a considerable tumor of the abdomen, quite hard; and the tumor grew broader and broader upwards, till, at the commencement of the epigastrium, I felt it well defined, its edge rounded off, and its shape something like a segment of a circle. On looking at the breast, the areola appeared of the darkest brown. All this, of course, made me very suspicious. At one part of the tumor, the upper part, near the right hypochondrium, I found a projection, smooth, firm, and globular, as if a

lobule was there. While my fingers were upon it, however, it disappeared—away it went. On applying my fingers a second time I found it again, but more in the centre; then it receded, and I felt it lower down. While I was feeling it there gave such a kick that I started and withdrew my hand. The nature of the case was perfectly clear, but I said nothing about it; and asking the maiden how long she had had the dropsy, she replied three months. I asked her if she still menstruated, and she replied that nothing of that kind had happened for ten months. I asked her if she was ever sick, and she replied every day, and all day. I think it very likely, from all this, and what I have seen in other women, that she really had no idea of being pregnant. I believe that many women become with child, and are not at all aware of it; not that they are not aware that they have taken all the proper means for getting into that state, but that they have no idea that those means have taken effect. It is so common for women to indulge, and think no harm can come of it, because so frequently no harm does come, and they perhaps themselves have so long indulged with impunity—it is so common for women to suppose that no harm can come to them from it, and not to know that, in these matters, sometimes a very little goes a great way. I know that some are impostors, and come to the hospital declaring themselves not with child while they know that they are, and protest and pretend they are so virtuous that the thing is out of the question—quite impossible; yet I do believe that many are deceived. This woman, I think, must have been deceived, and for this reason—she told me at once, honestly and frankly, that she was constantly sick, and that she had not menstruated for many months. Now, I think, if she had really wished to deceive, she would not have acknowledged these two circumstances—I think not.

I have been told by gentlemen who practise midwifery, that single women are frequently so little aware of being with child, that they have actually been taken in labour and yet would not believe their real state. I have been told of women who suffered the pains of labour, and without being at all convinced, and have still persisted that they were not with child. Of course it would be absurd any longer to attempt deception, and I think such conduct must generally arise from ignorance of their real condition. I think that single women in the family way have frequently no idea how very easy it is for them to become so. A man cannot be too tender towards the female sex, and I therefore did not reproach her with imposture, nor even declare her state to her in express words. I said nothing more than that she had not got the dropsy, and re-

quested you to listen to the little one's heart, which beat distinctly 120 in a minute, while the mother's pulse was only 76.

This case is interesting, particularly on this account: when we applied the stethoscope to the abdomen, low down on the left side, the child's heart was heard distinctly pulsating with a double beat. I myself counted it 120, while the mother's pulse was 76. It was perfectly distinct: there could be no doubt at all about it, and several gentlemen examined as well as myself. I had never heard the fetal heart pulsating before.

Respecting the treatment of this case, the prescription I wrote was, *cicat*—let her depart in peace.

The case is only important as shewing the necessity of taking pains to make a careful diagnosis. Any one would suppose that a case of this kind could never occur; but I do recollect, as I have already stated, seeing, when a pupil, two pregnant women admitted, but not examined in bed, and prescribed for at once in the admission-room—ordered diuretics and other remedies for dropsy. Though luckily no harm was done, yet the physician looked exceedingly ridiculous; it occasioned talking and laughing among the pupils, and must have made the patients themselves think, at all events, that the doctor was no conjuror.

January 31, 1831.

Pericarditis—Chorea—Various Cases—Glanders in the Human Subject—Inhalation of Chlorine and Iodine.

FIVE cases were presented, gentlemen, last week: one of pericarditis, one of St. Vitus's dance, one of universal imperfect paralysis below the neck, one of rheumatism, and one of chronic gastritis. One patient died in the course of the week—an old woman, who had had chronic bronchitis for many years. She came in three or four days before, almost in a dying state.

Pericarditis.

Of these cases, that of *pericarditis* is the one to which I will first direct your attention. The disease occurred in a man *æt.* 44, who had been ill, he said, two months; and he ascribed his disease to lying in a damp bed. I may mention that there is not a more dangerous thing in the world than for a person to lie in a damp bed. The late Dr. Heberden wrote a paper, in the Transactions of the College of Physicians, to make people believe that it was not so bad a thing to wear a damp shirt, or sleep in a damp bed, as the world generally imagined; and

he brought forward a certain number of specious arguments in favour of this opinion. But I think the experience of all the world who have beds, is decidedly against him. How many persons do we not see lose the use of their limbs, and how many suffer severe inflammatory complaints, from the carelessness—I may say the *wicked* carelessness—of those who have the charge of beds at inns and lodgings. The case before us is an instance of the dangerous effects of a damp bed.

From the time this patient slept in a damp bed he never could get himself warm, and, in about a week, pains of an acute character came on in his limbs. In about three or four weeks these were succeeded by difficulty of breathing and palpitation. Hence you observe not only the immediately injurious effects of a cold and damp bed, but its distinct effect in producing rheumatism; and you see the further fact of the rheumatism being followed by difficulty of breathing and palpitation. He came here to be an out-patient, thinking that he could have something given him—"a little stuff," as they say—a *little* something or other to do him good and set him right. But he was too ill to be about; and I found his breathing very short, that he looked exceedingly ill, that his pulse was irregular in force; and I immediately applied the stethoscope to his chest, by which I ascertained that his heart was beating rapidly, violently, and irregularly. He did not complain of his heart particularly, but of his chest altogether. The left ventricle, however, was beating with a bellows-sound, and, on pressing, I found the whole region of the chest over the heart tender; and, indeed, the whole of the epigastrium was tender. The bellows-sound which I heard took place at the moment of the pulse, and it was heard loudest in the left half of the heart's region; but the other half beat with equal loudness and strength, and the whole with an irregularity of force. The heart beat quite regularly with respect to time, but there was an irregularity in the different beats with regard to force. I had him put immediately to bed.

I consider this a decided case of *pericarditis*. I believe that the usual symptoms of acute *pericarditis* are such as I have detailed them in the lectures which I have published, and in tolerable accordance with the relation of this man—"pain in the region of the heart, sometimes severe and lancinating." In this patient there was pain in the region of the heart, though not very acute—not lancinating; but the disease was only subacute, or was subchronic, which you choose; it had existed two months. The pain did not dart in any direction either up to the clavicle or through to the scapula; neither was it down the arm. In really acute *pericarditis*, however, you will find, as I have

stated, the pain "generally darting through to the left scapula, upwards to the left clavicle and shoulder, and down the arm a certain way; and, what is remarkable, rarely extending quite so far as the elbow. I once had a case in which the pain extended down the fore-arm, but it did not quite reach the wrist. The pain is increased by pressing forcibly upon or between the ribs and cartilages over the heart, and by pressing with the points of the fingers upwards against the diaphragm, under the cartilages of the left false ribs; frequently even by pressing the epigastrium and left hypochondrium in the usual manner." Now here tenderness was felt on the least pressure between the ribs, and by a strong pressure on the ribs, over the heart; and tenderness was experienced on pressing upon the epigastrium and pressing up under the cartilages of the left ribs. "The pain," I continued, "is often increased on inspiration, and by lying on the left side. I think that patients are usually easiest upon their backs."

That was the case with this man. I observed that he lay constantly on his back. You will find it a general rule, in affections of the heart, that persons lie much less easy on the left side; and they nearly all prefer lying on the back, or on the right side. I presume this arises from the circumstance, that, when patients lie on the left side, the heart is so much nearer the left ribs that the tender pericardium or heart is so much the more struck and compressed; or if the heart be beating violently, as it does in many cardiac affections, though no unusual tenderness exists, it thumps the more strongly against the ribs, and on that account the feeling of palpitation is increased. "The respiration," I have said, "is rapid, but less so than in affections of the lungs." Here the respiration was rapid. "There is sometimes a cough, which is dry." This man had a little dry cough. "Nearly always palpitation, frequently violent, at least upon exertion." This man had palpitation. "Sometimes, though more rarely, a disposition to syncope." This man felt constantly very faint. "The pulse varies exceedingly; it is necessarily quick, and often, but not always, small in proportion to the heart's action, and only sometimes intermittent and irregular; neither is it always very hard, or even full." Here the pulse was quick, but not particularly small, nor was it full; there was nothing to be noticed in the pulse but its quickness, and that the force was not equal at every beat. "Sometimes the pulse is intermittent and irregular." Here it was not intermittent, but irregular in force; it is frequently so only as to force. "Neither is it always hard nor very full." It was here neither hard nor full. "The countenance is described as anxious, and the features con-

tracted; but this, I imagine, happens only when the pain is acute, and is equally the case in pleuritis." His expression was anxious, and his features sharp. Then I have said with respect to auscultation, "On examining by the ear, the whole heart is found acting more forcibly, and with a clearer sound than in health; but this is all. Auscultation appears to me, however, of negative use. We do not discover the loud murmur nor the sonorous or sibilous rattle of bronchitis, the crepitous rattle or obscure respiratory murmur of pneumonia (I should have printed *peripneumonia*) nor the ægophony of pleuritic effusion, unless these diseases are combined with pericarditis." The absence of these led me to exclude so many affections, that pericarditis was the only one left under the particular local symptoms. "In all uncombined cases, therefore, light is thrown on the disease," I continue, "neither have we the *partially* excessive, or defective impulse or sound, or preternatural sounds, of organic diseases of the heart." There was here no partially excessive sound or impulse, nor was there any defective sound or impulse; the whole heart was equally excited.

I think if you attend to those particular marks which I have now mentioned, particularly pain on pressure over the heart, and under the ribs on the left side up against the diaphragm, you will rarely mistake a case of pericarditis. "The diagnosis of pericarditis," I have said, "is thought by many to be extremely difficult. Laennec declares that he has frequently suspected it when it was not found, and found it when he had not suspected it. By close inquiry into the existence of all the marks just mentioned, I confess the diagnosis has never proved difficult to me. I would particularly lay stress upon the extension of the pain from the region of the heart, to the scapula, shoulder, and a certain way down the arm—symptoms which patients will not always mention unless questioned respecting them—and its increase on strong pressure upon or between the ribs and cartilages over the heart, and upwards under the cartilages of the left false ribs. These two points I do not remember to have seen mentioned any where, and the others are not dwelt upon in some of the best books. In Andral's *Clinique Médicale* pain of the epigastrium is said to have occurred in some cases; but the point is not spoken of as if inquired into: in one case only is the extension of pain to the arm mentioned; and its extension even to the shoulder does seem to have formed an object of inquiry."

But you will observe, that in this man, besides the symptoms which are ascribed to pericarditis in general, there was a bellows-sound. This is now and then undoubtedly heard in acute pericarditis: the affection, however, in this patient was not exactly

acute, for it had lasted two months: how long the bellows-sound had existed, I cannot tell. In chronic pericarditis this is exceedingly common, because in that affection the internal membrane is often affected, and especially the valves; and especially, again, at the mouth of the aorta; and therefore you have an evident reason for this bellows-sound. In acute pericarditis this sound is rarely heard, but now and then you hear it. I have heard it in two or three cases within the few first days of the disease; and in general, when I have heard it in the acute disease, the pericarditis became chronic, and the noise still remained after the pericarditis ceased. With the pericarditis has been united an inflammatory affection of the internal part; the valves have become diseased, and an organic affection of the heart has been set up, so that the bellows-sound has not arisen through the pericarditis, but through another disease united with it. Where it has begun in acute pericarditis, it is, as I have just said, generally heard to continue after the pericarditis has been quite cured; and when an opportunity has been furnished of opening persons, there is generally to be found a disease of the valves, causing an obstruction; or there has been found a disease of the substance of the heart, so that the cavities were enlarged, and the opening become *relatively* too small; but now and then it undoubtedly happens that the bellows-sound which is heard ceases as you cure the pericarditis. In this man, as soon as he was well cupped, the bellows-sound ceased. I presume, that in such cases, the internal lining membrane of the heart is inflamed as well as the pericardium without; and that being the case, a spasmodic constriction takes place at one of the openings of the heart. We know that when any canal is inflamed, it is very liable to be thrown into a constricted state. When the urethra is inflamed, nothing is more common than for a greater or less retention of urine to come on, which, if slight, or if it only amounts to difficulty, may be got the better of by immersing the penis in warm water; or if it be more severe, is frequently remedied by a warm bath, or by venesection, cupping, leeching, and purging. I imagine that something of this kind occurs—a spasmodic constriction of the mouth of the aorta, when a bellows-sound is heard from the first in acute pericarditis, because that it is not essential to the disease is proved by the affection occurring continually without it, and also by the usual continuance of this bellows-sound long after the pericarditis is cured. It is therefore, I cannot but think, only an incidental circumstance, and in all probability arises from an inflammatory state of the lining membrane about the mouth of the aorta.

I may remark, that in all cases when this

is heard during the acute disease, whether it has ceased with the affection or continued afterwards, it has always, in my practice, occurred at the time of the pulse. You will find in nineteen cases out of twenty of the bellows-sound, that it is, under any circumstance of affection of the heart, synchronous with the pulse; that is to say, either at the very moment, or at the most minute interval before it: it does not take place after it, but either at the very moment, or so near it, that we may say it occurs at the same moment. The bellows-sound occurs, generally, when the ventricle contracts. This winter there must have been seven, eight, or nine instances of the bellows-sound among my patients, and in all of them it has taken place at the moment of the pulse—not one moment before it, and decidedly not afterwards. It is generally produced, I believe *always*, by an obstruction, absolute or relative. It generally occurs at the mouth of the aorta—that is, usually from the difficulty the blood has in escaping from the left ventricle into the aorta. In the case of the woman who, I stated, died from chronic bronchitis, besides the sonorous rattle all over the chest, shewing bronchitis, and a great congestion of dark blood in the face, you must have observed that there was a bellows-sound in the heart at the moment of the pulse, and loudest in the situation of the left ventricle: I could discover nothing more about the heart than that. It was evidently not the heart that produced all the symptoms, but the chronic bronchitis, which had existed for many years. On opening the heart, there was decidedly constriction at the mouth of the aorta. There was no thickening particularly, there were no excrescences, but at the *base* of one of the valves, not in the curtain or valve itself, a considerable induration was found: the valve was altogether contracted, so that instead of the base forming a segment of a circle, as it should have done, and as the other two valves did, it was spear-pointed. The valve was contracted, brought together, and the diminution of the whole circumference of the mouth of the aorta thus produced, was quite sufficient to account for the bellows-sound. I have no doubt that, from the want of minute examinations and from the want of looking comparatively at healthy hearts, many persons pass over a diminution of openings which really exists. But I can conceive a diminution taking place without any thickening of the parts, without any organic disease whatever, simply from spasmodic constriction. As long as irritation is kept up by inflammation of the internal membrane at or about the valves, I conceive it very probable that constriction may occur.

This case certainly affords an instance of the bellows-sound in sub-acute, or sub-chronic, or acute-chronic pericarditis. I

have already said that nothing is more common than the bellows-sound in chronic pericarditis, because this form of disease is the foundation of most diseases of the heart, at least they most frequently begin as the consequences of inflammation, and when inflammation exists, it exists generally also in the pericardium, so that pericarditis is one of the earliest things that occur in most diseases of the heart, and certainly is the forerunner of most structural affections of that organ.

It has been known only of late years that rheumatism is connected with disease of the heart. As far as I am aware, Dr. Pitcairn, of Bartholomew's Hospital, first pointed out this circumstance. He was a timid man, though a very sound physician, highly educated and well informed, but never could be induced to publish on any subject, being unwilling probably to see his opinions criticised, and himself laughed at and censured, as all people who make themselves public characters must make up their minds to be by some one or other. But although he never communicated the fact in the way of printing, he mentioned it to his medical friends, and a very early notice of it was given in Dr. Baillie's work on Morbid Anatomy. Sir David Dundas, of Richmond, afterwards wrote a paper on the subject in the Medico-Chirurgical Transactions, and, what is very extraordinary, never made the slightest allusion to what had been written by Dr. Baillie, and observed by that physician after the matter had been pointed out by Dr. Pitcairn. Dr. Wells of this hospital, who, though considered a little proud and cross, was one of the most acute men that ever lived, and whose independence, integrity, and honour, were equal to his acuteness, remarks, in a paper which appeared in the Transactions of a Society for the Improvement of Medical and Surgical Knowledge, and in which he has given a great number of cases of this description, that it was exceedingly difficult to suppose that Sir David Dundas had been ignorant of what had appeared in so popular a work as Dr. Baillie's Morbid Anatomy. But yet so it was. He wrote with the air of novelty, and his paper was printed by the council of the Medico-Chirurgical Society, although he certainly had not the slightest claim to originality.

At that time it was merely said that rheumatism was frequently followed by disease of the heart. But I believe the truth is, that rheumatism is frequently joined, or accompanied from the first, by pericarditis. So far as I have been able to observe, it is pericarditis that is induced, in the first instance, in most diseases of the heart; and pericarditis being induced and continuing, all other diseases of the heart follow it. If you look into cases of diseased hearts which have

been produced by, or rather have followed rheumatism, you will find in almost every one of them that they have been connected with inflammation of the pericardium—they seem to have begun in that way. Where there was no dissection, yet the history of the case shewed that the first symptoms were those of pericarditis, and certainly in my own experience all the diseases of the heart which I have been able to see as the consequence of rheumatism, have been decidedly pericarditis in the first instance. Those cases which I see at the very first are all pericarditis. I believe it is an inflammatory state of the pericardium which is induced, and when it is inflamed, just as occurs in inflammation of any other part, if it continues, various kinds of organic disease possibly may follow.

The disease is called pericarditis, whether it affects the portion adherent to the heart or whether the parietal portion. Perhaps if we were to follow the analogy of the names of the inflammations of the abdomen, we should call the one *carditis* and the other *pericarditis*. If that portion of the peritoneum which covers the liver be inflamed, we do not call it peritonitis, but hepatitis. It is only when the loose portion of the peritoneum is inflamed that we say the affection is peritonitis; and therefore when the close part of the pericardium is inflamed, we might call it carditis. But I have generally used the word as other authors have done, applying the name pericarditis to the inflammation of the pericardium wherever situated, and carditis to inflammation of the substance of the heart. This, too, is analogous to the names of the inflammation of the pleura, for if even the pulmonary pleura is inflamed, we do not call the disease inflammation of the lungs, but still pleuritis. The same custom prevails as to the arachnoid.

Inflammation of the substance of the heart is, as an acute disease, a rare thing; and I have never myself seen it. You will find a case recorded by Mr. Stanley, in the Medico-Chirurgical Transactions, in which the substance of the heart, however, had been inflamed as well as the pericardium. In that instance pericarditis had taken place, together with rheumatism of the extremities; the pericardium had become inflamed, and was found to contain several ounces of turbid fluid, with flakes of lymph, and had a reticulated layer of lymph in various spots. But the substance of the heart was quite black from congested blood, very soft, and studded with little collections of pus. Nothing could be more clear than that there had been inflammation of the substance of the heart, for extreme acute inflammation has a tendency to induce softening of parts and the presence of pus. Two or three other cases of the kind are on record, but it is comparatively a rare disease.

In regard to the *treatment* of this case, it was merely that of any inflammation; the means, however, being directed to the heart itself—to the immediate seat of the inflammation. The man was immediately cupped to twenty ounces over the region of the heart, and the relief was almost instantaneous. The next day the heart beat less violently, his breathing was less difficult, his pulse was more regular in force, and he was altogether better; there was no longer a bellows-sound.

I think I have usually observed that *local* bleeding in this affection is better than general; it must, however, be a local bleeding equal to what you would institute generally. It must not be a few leeches. By a local, I do not mean to say a trifling bleeding, but as great a depletion as you would perform in the arm, only taken from the neighbourhood of the affected part. A few leeches would be nothing, I *think*—I will not be certain, but I think that bleeding in the vicinity of the heart itself, in these cases, is very much superior to general bleeding. Although this man had been ill for two months, he got perfectly well in a very short time. I gave him five grains of calomel three times the first day, and the next day his mouth was, he thought, a little tender, so that the calomel was given him only twice a-day, and, after being continued for three or four days, was entirely omitted. His mouth became more sore, he was decidedly under mercurial action, and no relapse of the disease took place. The disease was evidently subdued by the free local bleeding, and, as I have often said before, no inference can be drawn of the use of mercury in any one case, unless the symptoms instantaneously remit when the mouth becomes sore; otherwise, of course, one cannot be justified in saying, from one case, that mercury does good, and it is only by comparing a series of cases treated with mercury with another series treated without that remedy, that any inference can be drawn. However this man did perfectly well; he had no relapse. If the bleeding relieved him at first, it is to be remembered that no aggravation took place—no relapse. He was, of course, restricted to slops; nothing but gruel, tea, barley-water, and toast and water, were allowed him for five days, but at the end of that time a little milk was added to his diet. The tenderness of the epigastrium went quite away, the tenderness over the region of the heart also disappeared, the pulse became natural in strength and frequency, and the bellows-sound entirely ceased—and I may say, ceased the very day after he was bled, so that I must suppose the impediment to the flow of blood from the left ventricle was of a spasmodic nature, and that the spasm arose from inflammation. He was admitted on the 6th January, and on the 7th I could

hear no bellows-sound at all; and from that time forwards, as often as I listened, I never could detect the sound again.

This was a very satisfactory case, and the man went away on the 27th January, because I of course kept him till he had recovered his strength. He then left us perfectly well, and at his own desire. When persons, however, have once had this complaint, if they are exposed to cold they are very liable to have it again, just as after rheumatism, or any inflammation of any other part: therefore it is quite possible that, without care, or through some accident, he may have a return of the disease; but for that a medical man is not answerable. If he have cured the disease perfectly, that is all he can do: in general he has no control over the subsequent circumstances and conduct of his patient, and if an affection return again from external causes, it is no discredit to either him or his art.

St. Vitus's Dance.

The other case, gentlemen, to which I beg leave particularly to direct your attention was that of *St. Vitus's Dance*. I last week stated that I had presented a patient with it cured, who had had the disease two years: that patient was a girl; this patient was a boy. The disease occurs much more frequently in girls than in boys, and the proportion of girls to boys who labour under it is very great. Dr. Heberden says, that in his experience one-fourth only of the patients who had this disease were males and three-fourths females. I made a calculation from my own experience in this disease during six years in the hospital, and I found the proportion about the same as had been observed by Dr. Heberden. Twenty-two females had had the disease, and but eight males. This is the opposite of what occurs in epilepsy: you will find the greater proportion of persons that have epilepsy are males.

This boy was 14 years of age. You find that the greater number of individuals who have *St. Vitus's dance* are from 6 or 7 up to 16 or 17 years of age. About the period of puberty, and a few years before, this disease is the most prevalent.—He had it also about three years ago. You will find the recurrence of the disease very common, and I have frequently seen persons who have had it two or even three times. I think I have observed the recurrences to take place more frequently in the spring than at any other time. I have formerly mentioned that there are in general no other symptoms in *St. Vitus's dance* excepting a little fatuity of look and mind. It is very common in this disease for children to be a little fatuous, and look so; but as the disease is cured, both the

look and the state of mind go away. Nothing, however, is more common than to find no other symptom than St. Vitus's dance. In epilepsy you often have headache, giddiness, and a variety of similar symptoms; in many diseases of the nervous system you have constipation or tenderness of the abdomen, but here there is usually nothing of the kind. In the greater number of cases of St. Vitus's dance that I see, there is nothing but St. Vitus's dance, or at the utmost also some little pain in the head; but as to a disordered state of the digestive organs, I rarely see such a thing in this disease. Children generally have their bowels regular; they have no diarrhoea; but of course sometimes children will have an affection of that description, or be costive, or have a slight inflammatory affection of the head, signs of fullness about the head; but none of these, I am quite satisfied, are essential to the disease. You may have these symptoms, but they are not essential to St. Vitus's dance.

With regard to the symptoms in this boy, he was in more or less constant motion; he could not walk straight, but twisted from one side to the other; his arms were flying about in all directions, and he made such faces when looking at you, and so wriggled his head, as to make one almost laugh: he was in perpetual motion. It is the character of the disease to have a catching of the fingers and other joints, twitches of the head, corrugation of the brow, and convulsions of all the muscles of the face, extensive flexions, and extensions and rotations of the limbs, perpetual motion, a rolling also of the eyes, and in walking you generally see one foot dragged after the other—such catchings of the tongue and of the muscles of the mouth and throat that articulation, deglutition, and mastication, are all impeded. This boy not only had twitches of the head, but could not speak; he did not speak for a length of time after he came to the hospital with any distinctness. In severe cases patients cannot lie in bed, and in still severer cases the convulsions continue during sleep, but in general they are suspended when the patient falls asleep.

The will has some little power over the motions. It appears that there is a strong inclination to these various motions, and the patient experiences a degree of pleasure in gratifying it. At any rate, for a moment if you give patients a strong motive, they can arrest the motions, though only for a moment. If they be at all frightened, their irritability is increased, and the motions become much aggravated.

You will frequently observe that one side of the body is more affected than the other, as in so many nervous diseases; sometimes the disease is nearly confined to one side; and you will frequently find that if you seize one arm and hold it tight, the other will be

more agitated, and the same remark applies to the legs, and to an arm and leg.

The duration of the disease is very various, and there can be no doubt whatever but that in most cases, after a time, it will cease spontaneously, but if left to pursue its course will sometimes not terminate for a long period. The girl who was presented last week had had the disease two years; this boy, however, had only had it for a month.

In regard to the treatment, he took at his admission two drachms of sub-carbonate of iron every six hours, and he never took any other medicine; but after he had been here some time, as the disease did not give way with great rapidity, I increased the doses to half an ounce; but had the two drachms relieved him as quickly as I could have wished, I should, of course, not have increased the dose; it was given him in twice its weight of treacle, and no aperient medicine at all was required. His diet was that of the house; there was no reason to lower his diet. There was no sign of fulness in the abdomen—no tenderness on pressure—no fulness of the head—no headache or giddiness except occasionally, such as children may accidentally have, but nothing at all to make low diet requisite. Under this treatment—with but one prescription, he got well, just like the man with pericarditis, who also had but one prescription during the whole time of the treatment. He was with us six weeks.

I have had now many dozens of cases of St. Vitus's dance, which have been all cured by this one remedy. There are other remedies which are exceedingly useful in the disease, and will cure it; but I think, compared with all others, this will cure the largest number of cases within a given time—I think so. I have not yet had a case in which I have failed with it; I mean a case which had existed only for a few months—was general, simple, and occurred in a very young person. The disease will sometimes be partial, and affect the head, or one particular limb, and continue for life in spite of every method you can adopt. It will sometimes be general in adults, and continue through life; but here it is generally united with some other nervous affection, perhaps with insanity or epilepsy. Except under these circumstances, however, I believe you will generally cure it with the sub-carbonate of iron. I do not say universally, but I believe generally. There is, however, a great difference as to the time in which the remedy will cure. Usually I have cured it in from one month to two; but I have had cases where it was necessary to continue the remedy for twelve weeks before I made an impression on the disease, and then it yielded rapidly and went away. Some may be discouraged if they have to continue the remedy for many weeks; but it would be wrong

to say it had failed unless it had been continued in some cases for three months; but these are extreme cases. However, if I found the case was not yielding to the remedy as quickly as I could wish, I would have recourse to other means at the same time, because the power of the medicine is now well established, and if other means are also well established, there is no reason why the patient should not have the full benefit of several. It is absurd to have recourse to more than one medicine if it answer the purpose; but you may wish to make the disease yield more readily, and, therefore, there can be no objection to resort at the same time to the cold bath, or electricity, or both—all of which have a certain power over the affection, and will cure a large number of cases. The sulphate of zinc has great power over the disease; it requires to be increased from a grain three or four times a-day, to several grains; and you would be surprised at the number of grains which a person will take at last without nausea. I should certainly, unless the disease was giving way rapidly, increase it steadily as long as it produced no nausea.

With respect to the bowels, I paid no attention to them in this case, understanding that they were regularly open every day.—Cases will get well under the use of purging, no doubt; but I have seen a great number of patients in the hospital, who had been briskly purged for a length of time before their admission, without getting at all better; indeed, some had grown worse, from being irritated and weakened; and the disease has at once given way under an opposite plan—tonic treatment. Old Meade, of this hospital, used to recommend iron in preference to any thing else in this affection. I presume the sub carbonate of iron, if given in gruel, or mucilage, would constipate the bowels; but it is most probable that the treacle in which I give it counteracts the tendency. Treacle is an aperient substance, and if taken alone in large quantity would most probably produce diarrhoea; but I presume it counteracts the constipating effects of the iron, and the iron the laxative powers of the treacle. You might imagine, *a priori*, that the sulphate of zinc would constipate the bowels in this disease, it is so powerful an astringent—and it certainly is one of the most powerful astringents we have in the pharmacopœia; but it does not. I have frequently given from ten to twenty grains three times a-day without any constipated effect at all.

There is a form of this disease which I myself have never seen, but which is very extraordinary, and of which, gentlemen will recollect, I gave a full account in my general lectures on the theory and practice of medicine, where persons are seized with a violent impulse to regular motions. In common chorea the impulse is to irregular motions,

but in the other form the movements are regular, so that the patients will have fits of dancing, and dance for hours, and it is said days, till they can keep up no longer, and down they go. Some have fits of running to a particular place; they will start from their home over the most dangerous places till they reach a particular place fixed in their mind, and then they drop down exhausted. Others are seized with fits of whirling round, pirouetting, and spinning and dancing, so that women who have never been taught to dance have, under these fits, danced in the most graceful manner. You have the authority of a very respectable surgeon in the country for this, Mr. Kinderwood, who has furnished a case of this description recently in the *Medico-Chirurgical Transactions*.—The disease, I believe, was first named from its appearing in this form. I need not say that *chorea* signifies a dance; and the disease was first particularly noticed in some women in Germany, who were seized with fits of dancing, and went to the chapel of St. Vitus, near Ulm, and there danced till they were cured. You will find in that everlasting source of amusement, Burton's *Anatomy of Melancholy*, the following account:—

“*Chorus sancti Viti*, or S. Vitus dance; the lascivious dance Paracelsus calls it, because they that are taken with it can do nothing but dance till they be dead, or cured. It is so called, for that the parties so troubled were wont to go to S. Vitus for help; and, after they had danced there awhile, they were certainly freed. 'Tis strange to hear how long they will dance, and in what manner, over stools, forms, tables; even great-bellied women sometimes (and yet never hurt their children) will dance so long that they can stir neither hand nor foot, but seem to be quite dead. One in red cloaths they cannot abide. Musick, above all things, they love; and therefore magistrates in Germany will hire musicians to play to them, and some lusty sturdy companions to dance with them. This disease hath been very common in Germany, as appears by those relations of Schenknius, and Paracelsus in his book of Madness, who brags how many several persons he hath cured of it. Felix Platerus (*de Mentis Alienat. cap. 3*) reports of a woman in Basil whom he saw, that danced a whole moneth together.”

If these cases had been described only in old works, they would have been treated with ridicule; but a great many things in old books are perfectly true, however strange they may appear; and it is often the explanations given of the occurrences that alone are preposterous. You will find a case mentioned by Dr. Watts, a most respectable physician at Glasgow, in the fifth volume of the *Medico-Chirurgical Transactions*. The patient, a woman—for most queer cases occur in women—had various motions at different times; she would roll over fifty or sixty times

in a minute, and would be sometimes seized with a violent tetanic rigidity; and yet all the time she was perfectly conscious.—You will find the case in the seventh volume of the same transactions, related by Mr. Kinder Wood, which also occurred in a female; she danced with grace, and was greatly delighted with music; and when a drum was beating, she danced up to it as close as possible, and yet, as I believe I mentioned, she never had learned to dance in her life. This woman also would take great pleasure in darting her finger into a hole in a screen, or darting it upwards against a given point in the ceiling. She sometimes would kneel down on one knee, with her hands behind her, and then suddenly spring up, and strike the ceiling with her hand, so that they were obliged to remove all the nails from the ceiling of the cottage—she was a poor cottager—lest her hands should be lacerated. It was observed that in her there was a great fondness of music, exactly what Burton had previously mentioned, and it was noticed that a tune was to be heard from her mouth, if a person stood near her; and they therefore got a drum and beat it, and she was delighted beyond measure. It was by perverting her musical ideas that the disease was put a stop to. They found that if they beat out of tune or suddenly stopped, she instantly stopped, and in that way they broke the paroxysms. They found that if, instead of leaving off, they beat a continual roll, it had the same effect.

I presume these are affections of particular parts of the brain. I think there can be no doubt but that individual parts of the brain answer individual purposes, that every part has a particular function, and I think these cases cannot be explained but by the fact that certain parts alone are under a violent state of excitement in these affections. Great light has been thrown upon these cases, I think, by the experiments of Magendie, who, by cutting a certain part of the brain in an animal, caused it to have a fit of rolling. I recollect seeing him divide a certain part of the brain in a rabbit, when it instantly rolled round and round till it rolled to the edge of the table, and fell off upon the ground. When he divided another part, instantly the animal attempted progressive motion: it extended its paws and its head, and assumed the attitude of progression. In some cases of affections of the nervous system, it has been observed that persons have had a violent desire to run forwards, and in others to run backwards.

Various Cases.

Respecting the other cases presented I will not detail them, because they are comparatively of little importance.

A case of *hæmatemesis* occurred in a female, as most of these cases do, and it occurred in one whose menstruation was suppressed.

Very frequently, I believe, the suppression of menstruation is not the cause, but the effect of other diseases. If a woman become seriously ill in any way, menstruation is very commonly put a stop to; but women, of course, ascribe all their complaints to the suppression.

There was also a case of *rheumatism*, but I need say nothing about it.

There was likewise a case of *universal paralysis*. If the man could have been cured of it, the success must have been slow; might have required a year or two years; but he longed to return home, and went out as he came in.

Glanders in the Human Subject.

I shall take this opportunity of mentioning that I have received a letter from a gentleman, giving me some information, which I may as well communicate in this way as in any other, respecting the treatment of glanders in horses. In consequence of these lectures being honoured—for I consider it a great honour—by publication, I receive constantly a number of letters, most of them, I may say all of them, in the highest degree friendly. I have among others received one from a gentleman with whom I have not the honour of being acquainted, Dr. Pidduck, who says,—

“Dear Sir,—Your very excellent paper on Glanders in the Human Subject, published in the *Medico-Chirurgical Transactions*, of which an analysis is given in the *Medico-Chirurgical Review*, has called to remembrance a remedy mentioned to me by the veterinary surgeon of the 13th L. G. at Canterbury, in the year 1820. It consisted simply of Venice turpentine diffused in steam.

“The mode of application was by putting a quantity of scalded bran mixed with Venice turpentine into a horse-hair bag, and tying it over the horse's head, and wrapping his whole body at the same time in a large blanket wrung out of boiling water, and covering him with several horse cloths. This threw him into a profuse sweat, promoted a free discharge from the frontal sinuses and nostrils, and the healing of the ulcerations.

“A cure was the consequence of this plan of treatment continued daily, when the bones had not already become carious.

“Having myself employed the general vapour bath, with terebinthinate medications, in many cases of malignant sores, both in private and dispensary practice with success, you will pardon me for recommending to you a trial of the same remedy, in the event of any more cases of glanders in the human subject presenting themselves to your notice.

“I have the honour, to be,

“Dear sir,

“Your faithful servant,

“J. PIDDUCK, M.D.”

Of course I know nothing of the accuracy

of the observations any more than this gentleman himself, but it is right that such a document should be made public when the inhalation of various substances is undergoing the test of experience.

Inhalation of Chlorine and Iodine.

I am putting in practice the inhalation of iodine and chlorine in phthisis. As all known remedies fail in curing this disease, I consider it my duty to try any thing that is said, on good authority, to cure this affection, or is in itself plausible. I have several patients now labouring under phthisis, who are inhaling iodine, and when a sufficient number have tried it, so as to enable me to draw any inference, I shall lay the result before the public.

OBSERVATIONS ON HERNIA.

To the Editor of the London Medical Gazette.

Edinburgh, 34, York-Place,
17th January, 1831.

SIR,

I HAVE to request you will give insertion to the accompanying observations on hernia, in your journal, as soon as convenient for your arrangement.

I remain, Sir,

Your very obliged servant,

JOHN LIZARS,

Surgeon to the Royal Infirmary,
Edinburgh.

When we take a survey of the cases recorded in the medical periodicals, during the last few years, we cannot refrain from coming to the conclusion, that we have not data sufficient to decide the propriety of operating in this perplexing disease; and these cases must convince every unprejudiced observer, that peculiarities occur in hernia which overturn all our anticipations and prognostications; while they seem to prove, that little short of a life-time spent in an hospital is requisite to amass a sufficient number of cases to guide us in our diagnosis. From these cases, then, together with those which have fallen under my own immediate observation, as also from considering what has been written on hernia by some of the ablest systematic authorities, I am induced to offer a few observations on the subject, together with the reports of cases which appear to me worthy of attention in a practical point of view.

There are four species of hernia

which, in my opinion, demand an operation, viz. the acute or inflammatory strangulated; the slow or chronic strangulation; the incarcerated hernia; and the obstructed hernia. Mostly all authors are agreed, that an operation is indispensable in the acute kind of strangulation, and very few dissent from its necessity in the chronic species; but a difference of opinion exists among our greatest authorities regarding an operation being necessary in either the incarcerated or the obstructed hernia.

The incarcerated is considered synonymous with the strangulated, by Mr. Lawrence; and according to etymology, he is nearly correct, as both of them mean an impediment or interruption to actions or functions. The term incarcerated, or imprisoned, applied commonly to an individual who is prevented from extending his actions beyond a given extent or boundary, is obviously employed by way of metaphor in surgery; whereas the word strangulated, as used in surgical language, means, when applied to the intestines, that they are suffocated, or unable to circulate their contents. By Professor C. Bell, accordingly, the incarcerated is considered distinct from the strangulated hernia; and it may be viewed as analogous to the chronic kind of strangulation in its first stage, that is, before the inflammatory symptoms have begun. In the writings, then, of the two authors now named, there is no difference between the incarcerated of the one, and the incipient stage of the chronic kind of strangulation of the other; nor, strictly speaking, would there be any difference between these, and the obstructed of Mr. Stephens, did not this last author insist on adhesions being a condition of the obstruction. Mr. Lawrence himself allows, that the symptoms are often of such a mixed and indefinite nature, as to allow of their being arranged, without impropriety, under either the acute or the chronic species; and Mr. Stephens considers mixed cases, that is, cases of obstruction and strangulation, to be of much more frequent occurrence than those of simple obstruction. These three species—the chronic kind of strangulation, the incarcerated, and the obstructed hernia, all prove fatal if not relieved, by inducing, first, impediment to the muscular or peristaltic action of the intestine; secondly, inflammation; and lastly, exhaustion, or

gangrene. "Surgeons," says Professor C. Bell, "should put this simple question to themselves: does it not happen, that when there is obstruction in circumstances which do not prevent the blood passing to the diseased or obstructed part; when, consequently, there is not gangrene from deficiency of circulation, yet the patient is carried off with the same train of symptoms, and in the same period, and with similar appearances of death, as in what is called strangulated hernia? It is the obstruction of the canal, then, which kills the patient, not the strangulation and injury to a part of the intestine; and the obstruction kills by the violence of the inflammation occasioned by the accumulation in the upper parts of the canal, and the violent working of the muscular coat of the intestines." So much for Professor C. Bell's clear definition of incarcerated hernia.

"The slow strangulation," says Mr. Lawrence, "takes place in large and old herniæ, which have been often protruded and replaced, or which have been long unreduced. The contained intestines, removed from their natural situation, and no longer supported by the pressure of the respiratory muscles, are probably rendered somewhat indolent in performing their functions. Irritation, and obstruction, and a consequent accumulation of the intestinal contents, supervene."

Mr Stephens, again, is of opinion, that adhesion of the intestine to the sac produces the same fatal result as the incarcerated hernia. "The character," says he, "which the disease assumes, is that of peritoneal and general abdominal inflammation;—the symptoms are not clearly those of strangulation: dissection, however, shows a very extensive inflammation of the intestine, &c., and more especially among the contents of the hernia. The inflammation here occurs as a consequence of the adhesions and morbid conditions which the parts in a rupture acquire; and therefore a hernia, besides the risk of its becoming strangulated, has other mischievous and fatal tendency."

This preternatural adhesion of the protruded intestine, in the last species, or obstructed hernia, it is obvious, must bind down the gut so as to prevent its muscular or peristaltic action;—thence it becomes an obstruction to the course of the fæces, and ultimately excites the

contiguous portion of the intestine to inflame; just in the same way as, only in a milder degree than Gimbernat's ligament binds down a small part of the paries, not the whole cylinder, of the intestine in crural hernia, and produces inflammation, with inverted action of the intestinal canal, and all the concomitant symptoms of strangulation. The adhesion of the gut, then, in this species, or obstructed hernia, must impede its natural functions more than in either the incarcerated, or the slow kind of strangulation; for in the first, or the obstructed, there is the adhesion combined with the removal of the intestine from its natural situation, together with the want of pressure by the respiratory muscles.

"It may be a question," says Mr. Lawrence, "whether the stricture produces its injurious effects, that, is, the peritoneal inflammation which supervenes sooner or later, by direct irritation of the parts included, or more indirectly by obstructing the intestinal contents;" and Mr. Travers observes, "that the symptoms of strangulated hernia *cannot be distinguished from those of mechanical obstruction*, unconnected with pressure."

Having made these preliminary observations, I shall proceed to detail two cases of obstructed hernia, one of which, not operated on, proved fatal; while the other, which had been operated on, was successful.

In the session of 1823 and 1824, I was requested by one of my pupils to visit a man about 70 years of age, who was labouring under strangulated scrotal hernia. I proceeded to reduce it, and in my attempt heard a gurgling noise, and found the tumor so collapsed that I naturally considered I had succeeded in the reduction. I ordered a cathartic enema, and afterwards half an ounce of castor oil. The injection operated indifferently, but the oil copiously;—still there remained a tenderness of the abdomen, with some febrile action, but no pain in the tumor. The patient died the fourth day from that on which I first saw him. Fortunately an examination was allowed. To my surprise, there were fully four inches of the ileum contiguous to the caput cæcum coli without the abdominal canal, in the herniary sac, extremely dark coloured, and coated with recently formed coagulable lymph, besides some

old adhesions; and between the intestine and the sac, nearly four ounces of sanguineous serous fluid were effused. Within the abdomen, the intestine for some inches, both above and below the seat of obstruction, was of a dark colour, and much thickened in structure. The peritoneal surface of the rest of the intestines, where they rested or touched each other with their convex margins, were studded with patches of inflamed vessels.

Since the above case occurred, I have operated with success on several similar cases, which I feel confident would have proved fatal, had no operation been performed. The next case which I shall relate, occurred in the Royal Infirmary, and I shall detail it at length from the Reports:—"Janet Sutherland, aged 35, admitted on Saturday evening, Nov. 5, 1830. She was a patient in the same ward about six weeks ago. On her admission, on that occasion, she had a crural hernia of the left side, which had been down for eight days, and was accompanied with obstinate constipation of the bowels, tenderness of abdomen, nausea, vomiting, and acceleration of pulse, but no pain of the tumor, although there was some tension. From the history of her case at that time, a portion of the tumor was known to have been constantly down for upwards of a year. The size of the tumor was considerably diminished by the taxis and the bath; and then by the use of purgative injections the bowels were freely opened, and their functions continued natural, the other symptoms disappearing. She states, that, after leaving the hospital, the tumor still further diminished, and one day went up entirely. Nine days before her present admission, after costiveness of the bowels, the tumor again increased, somewhat beyond its former bulk, since which period the bowels have not been opened, and she has been troubled with pretty frequent vomiting of green bilious matter. There is much distention of abdomen, with pain on pressing the lower, or sacral part of the epigastric region, also considerable distention of the tumor, but no tenderness of it whatever; the tongue is furred, and the pulse small and wiry. The patient was immediately put in the warm bath, and on grasping the tumor with the hand, the contents of the intestine went back into the abdomen with a gurgling noise. The tension and size of the tumor being di-

minished to the same extent as when she left the hospital last, no further attempt was made at reduction. A turpentine injection was then given, which produced a very scanty defecation of hardened feces. A draught of salts and senna was next given, which was vomited; afterwards twelve leeches were applied to the abdomen.—6th, A turpentine injection was administered this morning, but was not retained; no stool; the symptoms continue unabated, with vomiting of a greenish fluid, having a stercoraceous smell: no tenderness of the tumor. Mr. Lizars, in absence of Mr. Lisson, again placed the patient in the warm bath, and attempted the taxis, but without success; pressure on the tumor produced no diminution in its size, and no gurgling noise; the abdomen was remarkably tense and tender when pressed; the tongue brown, and the patient emitted a stercoraceous smell. A consultation was then held, when Professors Russel and Ballingall, and Mr. Lizars, were of opinion, that an operation should be immediately performed, which was done by Mr. Lizars, in the following manner:—A T incision was made through the integuments, the fascia superficialis, and the cellular tissue, which were dissected aside, when the herniary sac was exposed, adhering extensively to the intestine, which was about three inches in length. There were two small cysts, containing a serous fluid, formed between the sac and the intestine, in consequence of these adhesions, which was evacuated. The intestine was of a dark livid colour. Gimbernat's ligament was now divided horizontally towards the pubes, when the contents of the intestine were attempted to be emptied, but in vain. A portion of the neck of the sac, therefore, in the contiguity of Gimbernat's ligament, was carefully dissected off from the intestine, and the gut was then emptied of its contents, which could not be done before. The intestine and sac, in consequence of their extensive adhesions, could not be returned, and were consequently left in their position; they were covered with the integuments, which were brought together by stitches; a compress was applied, together with a bandage, and the patient carried to bed. Half an hour after the operation, a purgative enema was administered, when the bowels were freely opened, an effect which could not be accomplished before. Twenty-four leeches were ap-

plied to the abdomen, and half an ounce of castor oil taken by the mouth. By the evening she had had two motions from the castor oil, and expressed herself free from pain; the abdomen was flaccid, and not painful on pressure; the pulse full and soft; and the tongue moist." From the hour of the operation she progressively recovered, and was discharged this day, January 6, 1831, cured. Upon an examination before her dismissal, there was no appearance of either the herniary sac or the intestine, in the inguinal region; both having retired into the abdominal cavity, and thus admitting of the application of a rupture truss.

This last case, in my opinion, is very instructive. It shews clearly the nature of Stephens' obstructed hernia; for it will be observed, that no injections, no purgatives, no warm bath, no taxis, had the slightest effect in unloading the bowels, in lessening the pain in the abdomen, or in reducing its tenseness, until a portion of the sac was dissected off the intestine.—At the same time, I do not mean to deny that the constriction produced by Gimbernat's ligament, and the neck of the sac, contributed to produce this obstruction. From the fatal cases which I have witnessed, together with their dissections, I am decidedly of opinion, that in all cases of hernia, where there remain tenderness and tenseness of the abdomen, with inflammatory or febrile symptoms, after *apparent* reduction of the protruded viscera, or their contents, we are justified in operating; and it is my belief that the peculiar condition of the viscera, which will be found to be still protruded, form the chief, if not the sole cause of the fatal symptoms. If I am correct in this opinion, the motion of the bowels should be totally disregarded, as being equally deceitful with the *apparent* return of the protruded viscera. What do those, who object to operating in such cases as the preceding, say to the cases of hernia detailed by Sabatier, Dupuytren, and others; where, after returning the herniary tumor by the taxis, the symptoms of strangulation have continued,—the patient has been made to cough so as to again protrude the herniary tumor,—the integuments then divided and dissected back,—the sac or its neck found to be the cause of strangulation,—and where, on this being divided or dissected off, the intestine was relieved from all strangulation,

and returned together with the sac, with success?

 PARIS LETTER.

Opening of the Concours for the Professorship of Physique Medicale—Distribution of Prizes in the Ecole de Médecine—M. Andral—the late Riots and present Tranquillity of the Medical Students—M. Magendie—Académie des Sciences; Torsion of Arteries.

To the Editor of the London Medical Gazette.

Paris, Feb. 9, 1831.

SIR,

I HAVE procrastinated, I own, rather unreasonably, and that at a time when *materiel* of more than ordinary interest was at my command: but perhaps this very circumstance were the best excuse I could offer for my delay; one important event following another in quick succession, and something newer and still more important being always expected: at least this shall be the only excuse I shall occupy your time in offering. I will now proceed, without further apology, straightway to atone for my sins of omission.

The Concours, you are prepared to hear, is at present the great object of attention in Paris: the display opened on Monday afternoon (7th), and the scene of action, which was the large amphitheatre of the Ecole de Médecine, presented a most imposing aspect. At four the business of the court commenced. But I should first briefly notice what principally caught the eye of the observer on entering the place. There was the bust of Ambrose Paré, the first thing that attracted observation, which had not long ago been removed, but was now restored to its proper place, just above the President's chair. This part of the theatre was hung with scarlet cloth from the ceiling to the floor, and on each side were displayed the portraits of many of the old worthies who figured in the professorships of the Faculté. Opposite the chair, and on either side, were placed the benches on which the candidates sat. The judges though, I should mention, were seated with their backs to the vast assemblage of spectators. The whole ap-

pearance of the arena, in short, was imposing and solemn in the highest degree. As to the individuals who composed the Court of Examiners, perhaps a more able and justly celebrated set could not have been selected in all France: the names of the President, Deyeux, and the rest of the judges, Desgenettes, Orfila, Alibert, Cruveilhier, Adelon, Richerand, and Moreau, with those of Leroux and Andral, the two coadjutor-judges, or *suppléans*, are well known all over Europe. The candidates were six in number: MM. Legrand, Person, Donné, Guérard, Pelletan, and Norgœu; but M. Norgœu has since retired from the field. It was curious to observe the formalities with which the business commenced. M. Andral, as secretary, read the ordinances of the King, and the University regulations relating to the order of the course; those relating to the Concours for the chair of *Physique Médicale*, the present object of contention, in particular: then having called over the names of the candidates, he put into their hands a list of the judges, in order that they might protest against or challenge such of them as they might have any fair objection to. They were permitted to retire into an adjoining apartment for the purpose of deliberately considering the list: but they presently returned, and made no challenge. It was then the turn for the judges to retire; and their object in so doing was to fix upon the question for the written essays, the composition of which engaged the candidates during the next day, from ten till four o'clock. But thus ended the first day of the Concours—nothing positively done—all mere show and ceremony, or little else. I have now lying before me one of the papers issued by the Minister of Public Instruction, containing the official regulations of the Concours: I shall make a few short extracts from it, with your permission. After mentioning that the chairs, which are forthwith to be filled by duly-chosen professors, are those of *Physique Médicale*, *Pathologie Extérieure*, and Physiology, it simply states that the only qualifications required of candidates is that they be in the enjoyment of the common rights of citizens; that they be at least five-and-twenty years of age; and lastly, be doctors in medicine or surgery. The trials of skill, and other tests to which they must submit, are then set forth: these are—1st, That the claims of each

candidate to public respect and confidence be discussed by the judges assembled in full court; their works and services taken into account, and duly appreciated. 2d, That a printed dissertation be laid before the judges, in twenty days after the opening of the Concours; the subject to be on the general business of the chair contended for, with an account of the plan and method intended to be adopted by the candidate, should he succeed. 3d, That a written reply be given to a question drawn by lot, the question being the same for each candidate, with the same time for writing upon it; the composition then to be read publicly by each writer before his judges. 4th, That a lecture be delivered, after a day's preparation, upon some matter connected with the chair; the exact subject to be assigned to the lecturer by lot. And 5th, That another lecture be required after three hours' deliberation, on a subject, as before, determined by lot, and the same for each candidate, heard on the same day; the lecture to be an hour's length, and delivered without any notes.

You will perceive that they have begun, in the present instance, with the third of these five tests; the question proposed being, "To expound the theory of vapours formed in vacuo and in common air, and to point out its advantages with respect to practical application." The most remarkable circumstance connected with this question is, that it is a purely physical one, and that owing, as it is supposed, to the non-medical members of the institute, who form an influential portion of the jury. I cannot possibly conceive what rational objection can be made to the question; yet I understand it has given much dissatisfaction to most of the *savans* who take an active interest in the proceedings.

Last week we had another grand affair transacted in the same *locale*; I allude to the distribution of prizes in the *Ecole de Médecine*, an event about which the *Faculté* have been more than ordinarily solicitous this year. The regular business of the school was suspended for the day, the great amphitheatre was brilliantly decorated on the occasion, and the successful students were crowned in presence of the Dean, the Professors, a large number of physicians, and a thronged multitude of the pupils belonging to the institution.

But what pleased me most was the eloquent and judicious address which M. Andral pronounced at the opening of the ceremony; and he seemed to inspire all his auditors with similar feelings of pleasure, for he was repeatedly and loudly cheered from the crowded benches. The speaker, after dwelling for a time on the advantages of an establishment which thus called together annually both the teachers of medicine and their pupils, and held out such cheering encouragement to the latter, in the way of filling them with a spirit of emulation and enthusiasm for study, took a short view of the history of the Faculté—praised the *Convention*, but branded the minister who took upon himself the audacious responsibility of destroying by an ordinance what was properly regulated by a law. He next pronounced an eulogium on the late M. Desormeaux, bestowed a brilliant eulogy on the *concours*, which, he said, was entirely due to that prince “whom the free choice of the people had placed on the throne—a prince who had been imbued to a certain extent in our own studies.” He concluded by exhorting his auditory to prepare themselves for the bright prospect before them by pursuing their courses diligently, conscientiously,—*peaceably*.

Now, there was nothing in the manner of this little oration that many other men present could not have thrown perfectly into the shade, for M. Andral is strikingly deficient in all the outward graces, and more obvious qualities, which constitute an eminent speaker; but there was an unusual animation about him on the occasion, and his plain little figure, and unaffected utterance, being worked up into something like genuine impressiveness, the general effect which he produced was decidedly of the best sort, tending, as the marks of approbation with which his concluding advice was received evidently shewed, most successfully to secure the peace and tranquillity of the medical students of the metropolis.

This brings me to say a few words on the late *affaires* of the Parisian pupils; and I believe I can do so now with far more confidence than I could have been lately justified in doing.

It is now put beyond a doubt, that what the authorities wanted most in the matter of these disturbances was decision; the calm which has ensued since the last decisive demonstration of

the Academic Council cannot possibly be attributed to any other cause. The line of conduct, however, adopted by the council towards the students is worthy of special observation. In the first place the firmness displayed by M. Barthe led immediately to the explosion of the 22d of January, when the riotous scene at the Sorbonne was enacted; it was, indeed, a memorable scene; I shall not be likely soon to forget the proceedings which I that day witnessed—the vast crowd assembled opposite the place of meeting—the threats—the cries and vociferations furiously re-echoed from all quarters—the aggravation of the state of things on the appearance of M. Barthe, as he passed into the council-hall; all this was only to be surpassed by the actual violence of breaking into the building. And so they did. The rage of these deluded young men at length reached such a pitch, that they penetrated into the very hall of the sittings, and would have probably laid violent hands upon the members, but that they had just quitted the spot. The seats were upset, the tables overturned, and the registers flung out of the window. M. Barthe, accompanied by the Procureur-General, had the temerity to speak to the maniacal group, and to attempt to quiet them; but they were soon silenced—mud, eggs, stones, and every convenient missile within reach were cast at them. The minister narrowly escaped to his carriage, the windows of which were soon shivered to atoms; and M. Persil was hurried away by one of his friends, after having been struck with a stone. But all this was only the crisis of the fever which had been for some time raging in the body corporate of the students; until this critical exacerbation had taken place, there was but little room for the salutary interposition of any healing measure. It had, however, now occurred; and no time was lost by the proper advisers to have recourse to the right remedy—a remedy rough indeed, but suited to the rough emergency in which it was to be employed. Examples were made of some of the ringleaders: three of the students were treated with signal rigour, and the rest were suffered to profit by what they observed. The explosion, however—the explosion, I must repeat, was every thing: it acted like a charm upon the rioters; it was by the terror and panic produced by their own final act that they were effec-

tually tranquillized. A complete revulsion was the consequence; and the following document, deposited the very next day in the bureau of the Faculté, was signed in the course of two hours with nearly 400 names:—"Protest. The pupils of the School of Medicine, having learned from the journals the scandalous scene which took place at the Sorbonne on Saturday last, and which is attributed to the students, hasten to protest against, and declare how much they disapprove, such disorders. Young men who have always shewn themselves the friends of liberty and public order, are not capable of conduct so opposed to their principles." (The signatures.)

It would be trespassing too much upon your space to enter further into particulars relating to these student-riots: suffice it, that since the occurrence of the crisis just mentioned, nothing has taken place in the slightest degree to disturb the tranquillity of the schools. Murmurings, to be sure, are sometimes perceptible, but they are merely the indications of the subsiding storm.

I perceive from the public journals that Magendie's recent enrolment among the legitimates has created a considerable sensation. It is true that he has arrived at length at a distinguished footing in the Institut—has obtained a *service* in the Hotel Dieu—and has succeeded Recamier in the chair of medicine in the College of France. *Venimus ad summum fortunæ*, as the old satirist has it. How or whether the public will be gainers by the elevation of M. Magendie is to me, and I know it is also to some of the most discerning judges, matter of considerable question. Facts and "old experience" are rather against the positive good of such elevations; and indeed laying aside all consideration of the politics of M. M. we shall yet be at a loss to determine on what our sanguine hopes of him should rest. I believe his qualifications for a chair in the Faculté may be readily summed up by saying, that he is undoubtedly an able physical experimentalist, but he is not a man of very extensive or varied information—he does not by any means possess an easy and elegant mode of expressing himself—and by those who know him best, he is generally allowed to be, as a professor, one of the *très-médiocres*.

Amusat, at a late sitting of the Academie des Sciences, read another paper on the torsion of arteries. Magendie and Boyer were the reporters pitched upon to give an account of it to the Academie: but old Boyer amused me a good deal by the warmth with which he declined having any thing to do with the business. "My opinions," said he, "are well known with regard to M. Amusat's *discovery*; they are fixed and unalterable: have the goodness to accept my resignation of the duty of reporting on the subject." M. Adelon did not persist in the nomination, but without further delay appointed Baron Dupuytren. On turning to the Baron I could perceive that he was seriously annoyed by the arrangement. When will these petty bickerings, prejudices, and jealousies, among men of science, have an end? I have many curious things to tell you about the Academicians; but I fancy you will think I have covered paper enough in the present letter. I shall with that impression close it—only subscribing myself as ever,

Yours faithfully,

ANGLAIS.

MEDICAL GAZETTE.

Saturday, February 19, 1831.

"Acet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas non veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

LONDON UNIVERSITY.

WE learn, on authority which we believe to be good, that the reports which have lately been in circulation with regard to a charter, conferring certain high privileges having been granted to the London University, are incorrect. No charter has been yet bestowed, nor is contemplated for some months to come. Meantime research is being made into various ancient deeds and documents, with a view of throwing light on the extent of powers enjoyed by other chartered bodies in England,

some of which, it is supposed, are of a nature to limit the privileges which it would be legal to confer on others. If our information be correct, it is probable that the charter will contain nothing in reference to degrees, but be analogous to that of King's College. At all events, should there exist the disposition and the ability (both of which are at present doubtful) to obtain for any new establishment privileges "equal to those of our most favoured Universities," we hold that it would be a glaring exertion of official influence, were the members of a joint-stock company, like the London University, to endeavour to overtop their rival by an arbitrary exertion of power, and the rather when it is considered that the late administration could, with at least equal ease, have obtained for the College of their creation all the privileges which the crown has the power to grant—but declined to do so. We suggested in one of our earliest numbers, and we repeat the recommendation—let not the London University nor King's College be either of them raised at the expense of its neighbour, according as the minister of the day has a certain interest in the one or in the other; but let the institution in Gower-Street be called what it really is—a *College*; and let the two together constitute one University. We should then have two antagonist powers united in one common cause, and see *Brougham College* and *King's College* striving in generous rivalry to shed lustre on the UNIVERSITY OF LONDON.

EXCLUSION OF NAVAL SURGEONS FROM COURT.

SOME discussion has taken place in the public papers, and a good deal of excitement been produced among the members of our profession, by a recent

regulation, precluding "Warrant Officers" from attending his Majesty's levees, and conceived to have been directed *inter alios* against Naval Surgeons. About such an indignity, supposing it to have been contemplated, there can be but one sentiment among those in or out of the medical profession, whose opinions are good for any thing—that it is offensive, undeserved, and intolerable. The outcry, however, has been a little premature, because there is not only no evidence at present of the regulation having been directed against the naval surgeons in particular, but on the contrary we have strong reason to believe that it was not intended to apply to them at all. In the first place, but eight naval surgeons have been to court since his present Majesty's accession, and they have been gentlemen whose presence could not by possibility have suggested the necessity of such a restriction:—in the next place, we understand that certain persons holding very subordinate situations, but yet styled *Officers*, have intruded themselves at the levees. Strictly speaking, all the officers of the Navy serve by warrant, for none of them have commissions bearing the signature of the King; but their rank is by an especial regulation measured by some acknowledged standard; thus the captain ranks with a colonel in the army, and the surgeon to a ship of the line with a regimental captain; so that they are, by courtesy, placed on the same footing as commissioned officers. But there are in the navy some who have warrants merely, without any rank—who are not regarded as gentlemen—who do not mess with the other officers, and who have not the privilege of walking the quarter-deck; the gunner, boatswain, and carpenter, are such. Now we do not believe that the recent regulation was intended to apply to any but those "warrant officers" who, being excluded

from the little levee of the quarter-deck on board ship, could not with any propriety be admitted at the public audiences of the King. We have reason to believe that the attention of the Lords of the Admiralty has already been directed to the oversight which they have committed, and that the obnoxious regulation will speedily be altered; unless, indeed, a change in the medical department of the navy, which we hear is contemplated, should meantime be carried into effect, and which would render their interference unnecessary.

We cannot conclude without advert- ing to the amazing impudence of a certain itinerant Editorial mountebank, who passing with his followers from place to place, endeavours still to keep alive a little interest by every now and then getting up a *scene*: we allude to the exhibition at the College of Surgeons on Monday, which was one of the most indecent and absurd that can easily be imagined. An audience, convened to hear the Hunterian Oration, was by a piece of legerdemain transmuted into a "meeting of the members of the College of Surgeons," in the midst of which—like Katerfelto

"At his own wonders wondering for his bread"—

stood the chief performer. This assemblage, which had not been convened for the purpose, and of which no chairman was appointed, proceeded at once to pass certain resolutions with regard to the exclusion of Naval Surgeons from Court—resolutions in themselves unexceptionable, but rendered ridiculous by the time, place, and manner, of bringing them forward. The affirmative of each question was put, *but the negative of none*; after which, and in the face of a protest against the measure boldly entered by one gentleman, the sentiments of those present were declared to be "unanimous:" and in conclusion, the proceedings of this body without a

head were appropriately transmitted to the Council, without a name. What may ultimately become of this anonymous production, we know not; but we must say that the natural—unpremeditated—innocent manner in which persons stood forward quite unexpectedly to second the resolutions, is worthy of the highest praise, and indeed that, considered altogether, the method of conducting business displayed on the occasion, may serve as a model for public meetings.

But if the proceedings of this *soi-disant* "meeting" were of a description to merit our commendation, so the performance of some members of the Council is entitled to its fair share of our admiration. We must, however, again refer to our report, on which our space prevents us from encroaching farther.

DR. GRANVILLE'S EVIDENCE ON THE GARDNER PEERAGE.

It is an observation trite and true, that when a man's feelings become implicated in any discussion, his judgment stands him in but little stead. Perhaps there never was a more striking illustration of this than has been presented by Dr. Granville, with regard to his evidence on the Gardner Peerage. It was one of those ill-fated parts of a man's career which all the world supposed he would have been anxious to have left undisturbed, that it might have been forgotten as speedily as possible. But, unluckily for the Doctor, he cannot, or will not, open his eyes to what other people thought of his evidence on that occasion; and with singular obliquity of intellect, brings it before the public on every opportunity, fitting or otherwise; so that, though now an old story, it is as fresh on the memory as when it first occurred.

The immediate cause of the subject being at present resumed, is the circumstance of Professor Amos having, in one of his lectures, taken the liberty

of adducing Dr. Granville's evidence on the occasion alluded to, as shewing the manner in which men, even of acknowledged talents, may expose themselves, in consequence of being unacquainted with the common rules of evidence, as adopted in our English courts: and we may remark, *en passant*, that these lectures, which, by their publication in this journal, are at once thrown into extensive circulation, are calculated, in an eminent degree, to qualify our professional brethren for avoiding similar blunders, and for rendering their learning and knowledge more fully available in the witness-box than they have ever been before. However, Dr. Granville, instead of bearing the criticism "with a patient shrug," had the inconceivable imprudence to bring the subject before the Westminster Medical Society, last Saturday. This produced a scene which must have been anything rather than soothing to his wounded feelings, and which, for the sake of order and decency, we trust the Society will never suffer to be repeated. Dr. Granville, it appears, addressed the chair on the subject of the opinion which Mr. Amos had expressed of his evidence (see our No. for Jan. 29, p. 547,) and though heard with some impatience, was yet allowed to proceed far enough to shew that Mr. Amos's account was taken from Le Marchant's report of the trial, the accuracy of which Dr. Granville admitted;—so that after all the fanfaronade—the flourish of trumpets at the preceding meeting—and the preparation of a week, the charges against Mr. Amos dwindled into one of "considerable exaggeration," (we use the Doctor's own words,) in asserting that the "greater part" of his evidence had been set aside, and of "ignorance" of certain events *posterior to the trial*, which the Doctor held Mr. Amos ought to have alluded to in commenting on his evidence given

before their occurrence. It will be seen that Dr. Granville throughout confounded two points entirely distinct and unconnected—namely, the value of his particular evidence on the trial alluded to, and the question whether a woman may carry her child beyond the period of nine months. The Doctor's arguments were in support of the affirmative of the latter question; a subject on which Mr. Amos never touched, and the full establishment of which could in no way affect the nature of Dr. Granville's evidence. The Doctor stated his opinion that, on these several accounts, Mr. Amos was unfit for the chair which he held; and how long he might have continued his oration, and into what extent of absurdity he might have been carried, it is impossible to say, had not the impatience of the Society and the interposition of the chair speedily put an end to the discussion.—(See Report of the proceedings, page 669.)

PROFESSOR AMOS'S LECTURES.

OUR worthy contemporary presumed on Saturday last to publish an attack on the opening lecture of the course on medical jurisprudence, recently published in this journal.—The motive for the angry ribaldry of the writer is not difficult to be assigned: yet we should not deign to notice any attack proceeding from such a quarter, had not the blockhead who attempted to be smart and critical on the occasion, contrived to exhibit so much pure and undiluted ignorance of his subject, that it were a crying shame not to show him up. This we cannot possibly do better than by publishing the following communication from a highly-valued contributor to our pages—though we honestly confess we have

had our scruples about permitting the learned writer to let himself down by encountering an opponent so utterly mean, feeble, and worthless. But the castigation, we trust, will be wholesome for the culprit—and, to say the truth, we are rather indebted to him for the opportunity he has given us of adding to our readers' stock of information on one of the most important subjects in medical jurisprudence, and of making "assurance doubly sure" as to the correctness of the very point which he so impudently presumed to question. Meantime, what can be more ludicrous than the fact, that the unlucky critic was all the time of his tirade presenting us with the best possible example of what he himself so beautifully terms the "*fudgery*" of his own pretensions?

To the Editor of the London Medical Gazette.

SIR,

Your hebdomadal contemporary has, I perceive, on Saturday last, indulged himself in some fretful and flippant strictures on the first lecture of Professor Amos's course, now publishing in your Journal: may I be permitted to offer a few remarks on the performance of our sagacious critic? I will not occupy your space—nor, indeed, should I condescend to notice the gross misrepresentations of Mr. Amos's statements and arguments, with which the paper in question abounds; nor the coarse and intemperate expressions in which it is couched—for these, I understand, are the habitual language and current cant of that publication—but I cannot refrain from calling your attention to one part of the tirade—the only one which, to superficial readers, might seem to have a semblance of ground to rest upon—I mean that part in which the professor's accuracy with regard to a *point of law* is questioned—upon which Mr. Amos is charged with advancing a doctrine which is roundly stated to be erroneous and absurd.

Mr. Amos's position, which is so positively, and at the same time so uncourtously denounced, is, that by the

law of England, "In order to render a dying declaration admissible, it is not necessary that the deceased should *express* any apprehension of danger, for his consciousness of approaching death may be inferred from the nature of the wound, the state of illness, or other circumstances of the case*."

It might have been expected that, before impugning this position in an unhesitating and opprobrious manner, the disputant should have prepared himself with some decision, in which it had been determined that a dying declaration, made at a time when the declarant's consciousness of approaching death could only be *inferred* from his state of illness, and when he has not *expressed* any apprehension of danger, had been rejected in evidence on that ground. No such decision is, however, adduced for this purpose. The fact is, that the decisions which are upon the very point in issue are numerous and uniform, and several of them have been determined by the twelve judges; and they are directly in favour of Mr. Amos's position, which adopts their language to the letter.

In Woodcock's case (Leach's Crown Cases, vol. i. p. 500), Chief Baron Eyre thus expresses himself upon this subject:—

"The most common and ordinary species of legal evidence consists in the depositions of witnesses taken *on oath* before the Jury, in the face of the Court, in the presence of the prisoner, and received under all the advantages which examination and cross-examination can give. But beyond this kind of evidence there are also two other species which are admitted by law; the one is the *dying declaration* of a person who has received a fatal blow. * * * Now the general principle on which this species of evidence is admitted is, that they are declarations made in extremity, when the party is at the point of death, and when every hope of this world is gone: when every motive to falsehood is silenced, and the mind is induced by the most powerful considerations to speak the truth: a situation so solemn and so awful is considered by the law as creating an obligation equal to that which is imposed by a positive oath administered in a Court of Justice. But a difficulty also arises with respect to these declarations; for it has not appeared, and it seems impossible to find out, whether the deceased herself apprehended that she was in such a state of mortality as

* Med. Gaz. p. 547, present volume.

would inevitably oblige her soon to answer before her Maker for the truth or falsehood of her assertions. The several witnesses could give no satisfactory information as to the sentiments of her mind on this subject. The surgeon said, that she did not seem to be at all sensible of the danger of her situation, dreadful as it appeared to all around her; but lay, submitting quietly to her fate, without explaining whether she thought herself likely to live or die. Upon the whole of this difficulty, however, my judgment is, that inasmuch as she was mortally wounded, and was in a condition which rendered almost immediate death inevitable; as she was thought by every person about her to be dying, though it was difficult to get from her particular explanations as to what she thought of herself and her situation; her declarations, made under these circumstances, ought to be considered *by a Jury* as being made under the impression of her approaching dissolution; for, resigned as she appeared to be, she must have felt the hand of death, and must have considered herself as a dying woman. She continued to repeat, rationally and uniformly, the facts which she had disclosed from the moment her senses returned, until her tongue was no longer capable of performing its office. Declarations so made are certainly entitled to credit; they ought therefore to be received in evidence: but the degree of credit to which they are entitled must always be a matter for the sober consideration of the Jury, under all the circumstances of the case."

To this case in Leach is appended the following note:—

"In the case of Thomas Johns, who was tried at the Carmarthen Spring Session, 1790, for the murder of Rachael, his wife, the declarations of the wife, made between the time of the mortal blow and the death, were received in evidence, although it did not appear that she had *expressed* any apprehension of danger. It was objected that these declarations were not admissible, as it was not proved that she considered herself at the time as a dying person; the evidence not being express on that head: but that if the evidence were admissible, it ought to have been left to the Jury to consider whether she was at the time conscious of approaching death. But the Court was of opinion that the evidence of the state of her health at the time the declaration was made was sufficient to shew that she was actually dying, and that it was to be inferred from it that she was conscious of her situation; and gave no particular direction on the subject to the Jury, who found the prisoner guilty. But the case was saved, and in Easter Term, 1790, all the Judges agreed that it ought not to be left to the Jury to say whether the deceased thought

she was dying or not; for that must be decided by the Judge before he receives the evidence; and if a dying person *either* declare that he knows his danger, *or it is reasonably to be inferred from the wound, or state of illness, that he was sensible of his danger*, the declarations are good evidence. 1 East's Crown Law, 357, 358. And the same point was again decided in the Case of Henry Welbourn, Lincoln Summer Assizes 1792, before MR. JUSTICE ASHURST, on a case saved for the opinion of the JUDGES. 1 East's C. L. 360.

Without going through a bead-roll of cases on the subject, I shall cite passages in which Mr. Amos's position is stated nearly in the same terms in which he has expressed it, from two books which may be considered as among the best authorities on such a subject.

Mr. Starkie, in his *Law of Evidence*, p. 460, states, that "It may be collected that the dying declaration was made under an apprehension of impending death, from the nature and circumstances of the case, *although the declarant did not express such apprehension.*"

And Mr. Russell, in his *Treatise on Crimes and Misdemeanors*, says, "It is not necessary that the deceased should *express* any apprehension of danger; for his consciousness of approaching death may be *inferred*, not only from his declaring that he knows his danger, but from the nature of the wound, or state of illness, or other circumstances of the case." And for this point are cited, John's case, 1 East. P. C. p. 358, by the decision of all the judges; Woodcock's case, 1 Leach, p. 500; Dingler's case, 2 Leach, p. 561.

If, to the authority of Mr. Starkie's and Mr. Russell's books, I were to add that of Phillips on Evidence, I should have enumerated all the modern text writers to which the profession of the law would look with much respect upon such a subject; but as Phillips on Evidence is, in fact, edited by Mr. Amos, I should be only repeating his own authority; and I trust I have already made it sufficiently clear, that the writer of the blundering article in question is far less grounded in law even than some persons have thought to be necessary for qualifying a man for a *medical coronership*; and I would beg leave to suggest to the gentleman who has thus so needlessly exposed himself,

that *he* ever retires from the field with ignominy, who

"— fragili quærens illidere dentem
Offendit solido."

I am, sir,
Your obedient servant,
A TEMPLAR.

Feb. 14, 1831.

ST. JOHN LONG.

THIS poor persecuted individual has at length surrendered himself. A few days ago he drove to his apartments in Newgate, like a lamb to the slaughter. His arrangements do not seem even yet to be completed, as application was made on Thursday to have the cause put off till next week; the Judge, however, thinking that the mockery of justice might be carried too far, peremptorily refused, and the trial is to take place at the Old Bailey on Saturday (this day.)

WESTMINSTER MEDICAL SOCIETY.

WE have not lately been in the habit of reporting the proceedings of this society, but having been informed that Dr. Granville had given notice of his intention to make some comments on a lecture lately published in this journal, we requested a gentleman to attend for us, and received from him the subjoined memorandum of what passed.

The chair was taken by Mr. Bacont soon after eight o'clock, at which time the room was unusually crowded. When the minutes of the preceding meeting had been read and confirmed, Dr. Granville rose, and addressed the president.

He said that he had given notice on the previous meeting of his intention to make some remarks on an attack which had been made by Professor Amos on his evidence on the trial of the Gardner Peerage, and was now come to redeem his word. He premised that the laws of evidence were not the same in any two countries; that what was admitted in France was rejected in England, and

vice versa. He then proceeded to adopt the following line of argument—namely, that if the evidence he adduced was irrelevant, the Judge ought not to have admitted it; that the evidence he had offered was as positive as the nature of the question admitted; that his opinions had been drawn from the results of many cases registered by himself, or by pupils under his directions; that a medical man was much more likely than a barrister to come to a correct opinion on any such doubtful point, for *his* only object was to discover truth, whereas the lawyer stood with outstretched hands ready to take a brief on either side it might present. That Mr. Amos was guilty, at least, of considerable exaggeration in saying that the greater part of his evidence had been set aside by the court, for it was to be found in Le Marchant's account of the trial, which was a correct record of what had passed. The Doctor then proceeded to hold, that the question of protracted gestation had been satisfactorily answered in the affirmative, and that subsequent events had proved the justness of his opinions: for example, one of his female witnesses, whose evidence had been refused, was admitted at the time of the trial to be nine months gone with child, and yet was not delivered till several days after—that is, till a period later than that which had been declared possible. Again, he had brought the subject fully before the society last year, and the debate had been published in the Gazette and Lancet. The proofs therein adduced of the possibility of gestation being protracted were of the strongest kind; and if Professor Amos chose to comment on his evidence in the manner he had done, he was bound to have made himself acquainted with all that bore upon the subject. He was therefore of opinion, that in neglecting to obtain for himself the knowledge which was requisite, Professor Amos shewed himself to be unfit to do what he had undertaken—namely, to instruct others in jurisprudence. This observation was received with a buzz of astonishment, and symptoms of impatience, when

MR. GILBERT BURNETT rose to order, and in a neat and forcible manner reminded the President of the irrelevancy of the discussion. This was received with loud cries of *hear, hear*.

PROFESSOR THOMSON next rose, and protested against the propriety of suffering the time of the society to be occupied by criticisms on what appeared in any publication, or on the lectures of any Professor, wherever delivered. He also adverted to the absurdity of suffering points connected with party questions to be discussed in a society instituted for purposes entirely different. The Professor was proceeding with some animation, when he was interrupted by the President, who requested that the discussion might at once be discontinued.

DR. GRANVILLE again rose, and in a very good-humoured manner intimated his readiness to bow to the chair, when, to the astonishment of all, he was succeeded by

MR. KING, who stepped forward to enter his protest against the doctrine laid down by Professor Thomson: he thought every thing connected with the honour and dignity of the profession fit subject for their consideration. What farther he intended to have said was drowned amid general cries of "*order, order.*" When this subsided, the President told him that he could not suffer him to proceed; but Mr. King, nothing daunted, tried it again, and intimated his intention of bringing forward next night a discussion on the recent exclusion of naval surgeons from Court. Again, and a third time, did Mr. King essay to speak, and as often was his voice drowned in the general cries of "*order,*" and "*chair.*" At length, finding that the society would not give him a hearing, but were determined to support the chair, he desisted; when the regular business of the evening was commenced.

We may take the opportunity of expressing our regret, that some of those who have but lately joined this society seem determined, so far as they may be able, to convert it into an arena for discussing questions of medical polity. Such discussions always lead to party feeling, angry words, protracted debates, and a total absence of any useful result. If, to keep alive the languishing interest and waning fortunes of a weekly periodical, or for any better cause, such a society be thought expedient, by all

means let it be established; but let us have the Westminster Medical Society reserved for its original purpose—the communication of medical facts—the discussion of various modes of treating disease—the mutual interchange of thought upon professional subjects; constituting, as it *did*, a pleasant and useful institution, where pupils and practitioners met on equal and friendly terms to give and receive instruction. Already the number of new members has alarmingly diminished, owing to the vices which have lately crept into the mode of conducting the discussions; and the funds are consequently so much impaired, as to render it probable that some of the property, which in better times was funded, must be sold to meet the current expenses! But a few repetitions of the scene of last Saturday, and the society is ruined.

ROYAL INSTITUTION,

Friday, Feb. 11, 1831.

SIR GEORGE DUCKETT, BART. VICE-PRES.
IN THE CHAIR.

Mr. Harris on the Power of various Substances to intercept Magnetic Action.

THIS evening Mr. Harris gave an interesting account of an extensive and very laborious series of experiments in which he had been some time engaged, in order to ascertain the power of various substances to intercept magnetic action. This inquiry was suggested by an observation of M. Arago, that when a magnet was suspended by thin silk, with as little torsion as possible, within a ring, it vibrated less in a ring of wood than in one of copper, and that if the copper ring were made to revolve, it dragged the magnet round with it. Messrs. Babbage and Herschel reversed the experiments of Arago, and sus-

pended disks of copper over magnets, and when the magnets were made to revolve, the disks were forced into revolutions likewise; thus evidencing the reciprocal powers of the metal and magnet on each other. Now, if plates of various substances were placed between the metal and the magnet, very different phenomena resulted, according to the nature of the substances employed. Without giving an abstract of the modern doctrines of magnetism, with which Mr. H. premised his experiments, we shall confine our notes to the most important points, referring for the matters previously known to any of the lately published works on this subject; they all go far to prove the identity of magnetism with galvanism and common electricity, such as the magnetic poles, magnetic induction, attraction, &c. &c.

We have said, that if between the revolving metal, and the magnet which it causes to revolve, strata of different substances be interposed, very different phenomena result; *i. e.* a plate of glass, or of some kinds of metal, will not affect the revolution at all; while others cause it immediately to cease. Thus, a plate of iron interposed between the magnet and a disk of copper immediately intercepts the influence propagated from the one to the other, but a plate of *iron* will not intercept the influence of an *iron* disk upon the magnet. A similar plate of copper likewise could not cut off the action of iron on the magnet, or the magnet on iron, for the influence is reciprocal. But it occurred to Mr. H. that although the intercepting powers of various bodies was extremely dissimilar, yet that probably they all intercepted a little, and that if he could only increase the mass sufficiently, he could make any metal or substance the screen of another, just as glass is said to be transparent, and yet it intercepts a little light even in its thinnest laminæ, and if the thickness were sufficiently increased it would intercept the light of the noonday sun. With regard to magnetism this was proved to be the case: and, by a very ingenious apparatus, Mr. H. decidedly shewed the power of thick plates of zinc and copper to screen even iron. And from various experiments he deduced the following as the intercepting energies of various substances, assuming that of

Fluid mercury to be.....	1·00
Distilled water	0 27
Glass.....	·32
Marble	·35
Wood	·36
Cast bismuth	·45
— antimony	1·30
Solid mercury	2·
Rolled gold	2·6
Cast lead	3·7
Rolled platinum	5·2
Cast tin	6·9
— zinc	10·
— copper	20·
Rolled ditto	28·
— silver	31·
Cast bismuth and zinc...	1·4
— and copper 2 3	
— copper and zinc...	12·

On the table in the Library were two very ingenious and admirable instruments, invented by Mr. Harris, for determining the magnetic forces—*viz.* the magnetimeter, and an apparatus for vibration in vacuo.

There were also in the Library a variety of mechanical improvements and inventions, such as Parker's aero-fountain lamp, Barlow's correcting plate for ship's compasses, Abraham's apparatus for the use of persons employed in dry-grinding, &c.; the two last of which, being very ingenious applications of magnetic influence, were appropriately connected with the subject of discussion. In the natural history department was a beautiful specimen of the Chinchilla, the only live animal of the kind in Europe. We also noticed two double-headed *Planariæ*, sent for examination by Dr. Johnson, who proposes to give, on Friday, the 18th inst. an account of the reproduction and power of these curious creatures.

ROYAL COLLEGE OF SURGEONS.

February 14th.

Hunterian Oration—Curious Particulars of a Meeting (?) on the subject of the late Exclusion of Naval Surgeons from Court.

MONDAY being the day for the delivery of the Hunterian Oration, the theatre of the College of Surgeons became crowded earlier

than usual, and it soon became apparent from the buzz and bustle, that many had come prepared for something unusual. Some time before the hour at which the oration was to commence, Mr. Wakley entered the theatre, and was received with mingled cheers and hisses, the former greatly preponderating, and the persons at one side of the room being particularly uproarious in their applause. After a momentary pause he addressed the audience, professing his great sensibility to any insult offered to the profession, or even to any individual member of it. He then directed attention to an order which he said had lately been issued by the Lords of the Admiralty, excluding Naval Surgeons from his Majesty's levees. He trusted there might be some gentlemen present who had served in the Navy, and he would therefore sit down, that they might have an opportunity of coming forward to rescue their brother officers from degradation; but if no other gentleman came forward, he had himself two resolutions to propose.

Of course it was not intended that any other should take the business out of Mr. Wakley's hands, and in a few minutes he again rose, and proceeded to read his resolutions as follow:—

1. "That the surgeons and assistant-surgeons of the British Navy are gentlemen of the highest respectability and professional attainments, and that, by their talents and perseverance in the faithful discharge of their arduous duties, these gentlemen have rendered most eminent services, not only to their brave brother-seamen, but to the whole of the people of England.

2. "That this meeting has seen, with the utmost astonishment, and with feelings of deep-rooted regret, an order issued from the Admiralty to exclude from the levees of the King the surgeons and assistant-surgeons of his Majesty's Navy. That the President and Council of this College be therefore respectfully requested to memorialise the Lords of the Admiralty on the subject of this order, and to enforce in the memorial the claims of the surgeons and assistant-surgeons of the British Navy to the respectful attention of all classes of his Majesty's subjects, and to pray that the order under which they have been excluded from the presence of their Sovereign be immediately and wholly rescinded."

After these resolutions were read, the orator proceeded to say that now was the time for determining whether they should be adopted or not, as most probably, if the matter were postponed till after the pageantry of the day had been gone through, the President and Council would take themselves off, and leave the members to address the closed doors. Observing that "possession was nine points of the law," and that

no place could be so proper for the present assemblage to entertain the question as in the theatre of their own College, he said he should now propose the first resolution, adding that he had come there *without having acted in concert with any one, and that he did not even know whether the resolutions would be seconded.*

A gentleman who stated that he had served in the army, rose and seconded the resolution.

It being now necessary that the resolutions should be put, Mr. Wakley admitted that the proceedings might appear to be *somewhat irregular*, being, as they were, assembled without a chairman; he would, therefore, himself put the resolution. This he accordingly did; when a number of hands were held up, and the measure declared to be carried *unanimously—though the negative had not been put.*

The second resolution was then proposed by Mr. King, and seconded by a Mr. Wilkins; it was carried immediately in the same manner as the preceding.

[About this time a considerable uproar was heard at the doors, in consequence of a large number of members endeavouring to gain admission, having merely come to hear the Oration, and being perfectly unprepared to find the theatre already full.]

Mr. King was now deputed to communicate the above resolutions to the President and Council on their entering the theatre. This arrangement was scarcely made when those functionaries entered; Mr. Keate taking the chair as President. The deputy then rose, and was proceeding to address the chair, when he was interrupted by Mr. Keate, who reminded him that they were assembled for a specific purpose, and that until this were fulfilled it would be extremely irregular to enter upon any other subject; but added, that, after the Oration, he should with pleasure attend to what Mr. King had to say.

The Hunterian Oration was then delivered by Mr. Anthony White; at the conclusion of which Mr. Keate retired with the visitors, but almost immediately returned, having thrown off his gown, and the nace having been removed. Marks of considerable disapprobation were now manifested, and so much confusion arose as to render it somewhat difficult to gather what fell from the different speakers. But we understood several members to object to what they stated to be, on the part of Mr. Keate, a breach of promise. They maintained that he had assented to receive their resolutions in his official capacity; to which Mr. Keate answered that he had been unexpectedly called upon to take the chair in consequence of the illness of Mr. Headington, and simply for the particular business of the day, which business being concluded, he did not think himself authorized any longer to act as Pre-

sident, though as an individual member of the Council he was ready to listen to them.

Upon this, much altercation took place; when it had subsided a little, Mr. King took the opportunity of reading the resolutions, at the same time admitting that there had been some degree of irregularity in the proceeding of the meeting, which, however, he regarded as unavoidable under the circumstances.

Some person here declared that these were the *unanimous* resolutions of the profession. Upon which a member arose and entered a protest against any such assertion, saying "that he regarded the whole of the proceedings as entirely irregular." The words were scarcely uttered when the speaker's voice was drowned in the immense uproar that ensued, and what he had further to say we had no means of gathering.

A conversation was now held between Mr. Keate and Mr. King, with regard to the presentation of the resolutions, which Mr. Keate would only undertake to deliver to the Council in his individual capacity, yet without any pledge as to what measures might be adopted by them.

Sir Astley Cooper now rose, and expressed himself strongly against the propriety of the order that had been issued by the Lords of the Admiralty. He observed, that he could see no reason why a divine, or a lawyer, should be better received at court than an English surgeon; for that, if there were one person more useful than another in the state, it was the English surgeon. (Cheers.) But that his suggestion was, that if the present meeting should depute six individuals to meet the Council, he would answer for it that the Council would be most happy to co-operate with them in carrying their wishes into effect. He had only further to advise them to make arrangements for such a deputation.

Mr. Wakley objected to this course: he said that a contract had been entered into with the members, and it was their duty to see that contract fulfilled; the resolutions had been carried unanimously, and it had been agreed by the President that they should be received officially.

Mr. Keate said that he had not taken the chair with any reference to such discussion, but that in his capacity of an individual member of the Council he was ready to do what they wished.

Mr. Thomas said, that he and other members of the Council who happened to be present, were not so in their official, but in their individual characters; in which light, he stated, that what had fallen from Sir Astley Cooper must be viewed. The members present might take that gentleman's advice, but it was to be kept in mind that nothing which

passed on this occasion could be looked upon as the act of the Council.

Mr. Keate observed that he would, as a member of the Council, lay the resolutions officially before his colleagues, with which intention he stated that he received them.

At the close of these proceedings, Mr. Wakley once more addressed the meeting, and expressed his satisfaction at having been enabled to *contribute so much to their entertainment!!*

[We learn that some correspondence has taken place between Mr. Keate and Mr. King with regard to the resolutions above alluded to, which the former, we understand, has returned to the latter for the purpose of revision, inasmuch as, in their present form, they bear rather an anomalous character, purporting to be the result of a meeting which was never regularly convened, and being unauthenticated by any signature whatever.]

NOTICES.

The papers of Dr. M. Hall, Mr. Bransby Cooper, Mr. Grove, Mr. Tuson, Mr. Battley, Mr. Cooke, and Mr. Dix, as well as the London and Edinburgh Hospital Reports, are unavoidably postponed.

M. R. C. S. will perceive that we have anticipated most of his observations.

We cannot at present avail ourselves of Mr. G—ll's offer.

BOOKS RECEIVED FOR REVIEW.

The Effects of the principal Arts, Trades, and Professions, and of Civic States and Habits of Living, on Health and Longevity: with a particular reference to the Trades and Manufactures of Leeds, and Suggestions for the removal of many of the agents which produce Disease and shorten the Duration of Life. By C. Turner Thackrah.

A Manual of Analytical Chemistry. By Henry Rose, Professor of Chemistry at Berlin. Translated from the German, by John Griffin. London, 1831.

Professor Thomson's Introductory Lecture on Medical Jurisprudence, delivered in the University of London. 1831.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 26, 1831.

Abstract of a Clinical Lecture lately delivered

By DR. GRAVES,

AT THE

MEATH HOSPITAL, DUBLIN.

On the Seat of the Swellings which, in the latter stages of Fever, are usually attributed to Inflammation of the Parotid or Submaxillary Glands.

GENTLEMEN,—Every writer on the subject of fever has noticed the occurrence, in the last stages of that disease, of tumors which not unfrequently suppurate, and which all have considered as the consequence of inflammation in the glandular system; the parotid and submaxillary glands being the parts most frequently engaged. Four such cases have lately presented themselves to our observation—two with a favourable, two with a fatal result. The latter afforded us an opportunity of examining the nature and seat of this affection, with the view of determining the correctness of the opinion generally entertained concerning these points.

According to the best authors, the parotid and submaxillary glands, towards the termination of fever, are liable to become painful, tender, and very considerably enlarged; and the tumor so formed is either a fatal symptom, or else, becoming the seat of a benign suppuration, proves salutary, or even critical. When of the former unfavourable character, they are said sometimes to attain to a considerable size in a very short space of time, and also to be liable to a disappearance equally rapid.

In our first case, the sudden appearance of the tumor was very remarkable, for, in the course of a few hours, two swellings

had been formed, in their situation and general appearance resembling mumps of the largest size. They were so extremely tender that the patient screamed on their being touched even in the gentlest manner, and they were unattended by any cutaneous redness. Without producing any alleviation of the cerebral affection that constituted the predominant symptom of this poor man's fever, these swellings somewhat subsided before his death, which happened on the following day. Much curiosity was excited among the pupils, with regard to the nature of this local affection, and by many it was considered as arising from a sudden inflammation and tumefaction of both parotids; so exactly did the tumors, in extent and situation, resemble the mumps. Their hardness, it is true, was not so great as that usually observed in the latter disease, but this circumstance alone could not be relied on as a distinction. On examination, the parotids were found raised up by the tumors, but were not enlarged or otherwise altered in structure, except that their interstitial cellular tissue was, as it were, bathed in a reddish serous fluid, evidently the result of a violent inflammation of a peculiar character and short duration. The swellings were owing to the effusion of a similar fluid, which abounded most in the subcutaneous cellular membrane, while, in that which pervades the substance of the muscles, not only in the superficial, but in those more deeply seated, it was observed in lesser quantity. The intermuscular spaces were also occupied by this fluid in considerable abundance.

It may, perhaps, be said that these swellings were essentially dif-

ferent in their nature from the suppurating tumors observed in fever; but their identity is proved by the case of a young man named Connor, in whom swellings, in all respects precisely similar, arose six days previously to his death. The longer duration of the inflammatory process, of course, produced an alteration of structure somewhat different, but still evidently only an advanced stage of that just described, while it was also as evidently of the class of suppurating tumors. It is worthy of remark, that in Connor's case the tumor on the right side, on the fourth day of its appearance, occupied exactly the same situation that is observed in the mumps, and had likewise the same degree of hardness; while that on the left side, which was only of two days standing at that period, was situated lower down, and was much less firm. These swellings subsided a good deal a few hours before his death. The cellular tissue in the parts before enumerated was not infiltrated merely with bloody serum, as in the other tumors, but this serum was every where mixed with pus, and the cellular tissue itself had become dense and friable, and was of a reddish, or rather a flesh colour. The parotid and submaxillary glands shared in this affection of the cellular tissue, and consequently contributed their proportion to the formation of the tumors; but they by no means constituted the whole of the swellings, or indeed any thing like the greater portion of them.

A few days after Connor had been attacked, a similar swelling arose in a boy, named Byrne, who lay in the bed next to Connor; but it was confined to one side, and it occupied a position corresponding to the parotid, where it was most swollen: but in its less tumefied parts it extended both further downwards and backwards. This tumor suppurated, and formed an abscess, which was apparently much more superficial than the great mass of the swelling, and unconnected with it; for when it was opened, and its contents were discharged, the hardness and swelling in the region of the parotid seemed undiminished. The abscess, however, continuing to discharge matter, this swelling gradually declined, and finally disappeared.

At this very time a woman in the Fever wards was attacked with a similar swell-

ing, but which was evidently neither in the situation of the parotid or submaxillary gland: it was confined to the subcutaneous tissue immediately below the ear, and was prevented from suppurating by the application of leeches.

The facts just stated are, I think, gentlemen, conclusive, in proving that the tumors hitherto supposed to arise from inflammation of the parotid or submaxillary glands, and which in fever sometimes forebode death, and are sometimes the precursors of returning health, are not owing to an affection confined in its action to these glands; but, on the contrary, the inflammation and its consequent tumefaction are seated in the cellular membrane of all the neighbouring parts: so that the bulk of the tumor is sometimes altogether, and generally, for the greatest part, made up independently of disease of these glands. It would be rash to extend this conclusion to the mumps, *cynanche parotidea*—but I may be permitted to remark that I am far from being satisfied that the structure of the tumors so called has not been assumed without sufficient grounds. Indeed this disease so rarely, if ever, proves fatal while the swellings persist, that I do not know of any post-mortem examination of the tumors of mumps on record. Our only guide, therefore, is analogy; and when we recollect that our swellings agree with mumps, not only in general appearance and situation, but also in the sudden manner in which they arise, and, according to the testimony of authors, in the sudden manner in which they occasionally disappear; when we recollect also, that, like mumps, they shewed a decided tendency to be epidemic; we cannot avoid conceding that the points of resemblance are strong: the more so, that in both diseases the sudden disappearance of the tumor is always dangerous. The sympathetic inflammation of the *mammæ* in females, and of the testes in men, which not very unfrequently follows retrocession of the tumors in *cynanche parotidea*, may be objected to this analogy, and may be considered as proving the glandular nature of the swelling in mumps. On the other hand, we know of no other glands which are liable to become, in consequence of inflammation, so enormously enlarged in the course of a few hours, as the parotids in mumps, (if that disease really depend on an affection of these

glands alone); and, indeed, it may be observed, that acute inflammation seems, in all other glands, incapable of causing a degree of swelling at all comparable to that observed in mumps. The swelling, too, in other glands is better defined and more circumscribed, and scarcely liable to the sudden retrocessions observed so frequently in cynanche parotidea. It is a singular fact, that the salivary secretion is not notably altered in mumps, and yet were this disease dependant on inflammation of the parotids, a suppression, or at least some alteration, in the quantity or quality of that secretion, might be expected. Such, gentlemen, are the ideas which have at the moment occurred to me concerning the pathology of these affections—ideas which I have ventured to bring forward merely with a view of exciting further inquiry on the subject.

Poisonous effect of the blood of a patient upon Leeches—some of the lower animals unaffected by Prussic Acid—Morbid Symptoms sometimes occur, which assimilate those from Poisons—Conjectures with regard to the action of poisons in general.

The next case worthy of observation, is that of a woman from Baltinglass, admitted for an obstinate stomach affection, which had many of the characters of organic disease, but the result has proved that no permanent alteration of structure existed in the stomach—for she completely recovered. You may remember, that she was at one period of the complaint afflicted with constant nausea and vomiting, accompanied by considerable tenderness in the epigastrium, for the relief of which twelve leeches were applied to the region of the stomach. At my next visit I was surprised at being told by Mr. Parr, the apothecary of the hospital, that the leeches, shortly after they had begun to act, had all fallen off, and immediately died. This curious occurrence naturally arrested our attention, and twelve leeches more were ordered, the precaution being first taken of perfectly washing the skin to which they were to be applied. These leeches shared the same fate as their predecessors, and this happened in several successive trials, made by way of experiment, until about sixty leeches, all previously in good health, had been thus destroyed. Of course there is no other way of accounting for

this phenomenon, than by supposing this woman's blood was so different in composition from human blood in general, that it proved poisonous to these animals. No accurate chemical experiments were made to ascertain what was the nature of this poisonous principle, but it may be observed that the physical properties of her blood presented nothing remarkable, its serum and crassamentum having the ordinary colour, consistence, and smell. Neither could this quality have been owing to any medicine she was at the time using, for the blood continued to act as a poison to the leeches for several days after she had altogether left off medicine. It was suggested by some of the students, that this poisonous property might have arisen from a small quantity of hydrocyanic acid, which she had been taking, but the remark just made disproves the truth of this hypothesis. Besides, we have frequently had patients in the hospital in whom much larger doses of hydrocyanic acid were not followed by this state of the blood.

With reference to this topic, I may observe that the lower orders of animals seem much less susceptible of the effects of certain poisons which act upon the nervous system, than the higher orders. Thus, in two cases of Guinea worm, which I treated in the Meath Hospital about nine years ago, I attempted the destruction of the entire worm by means of applying prussic acid to a portion of the animal just drawn out, but still continuous with the remainder; but I entirely failed in the attempt, the animal appearing to be totally unaffected by the poison, although the acid was strong, and was applied several days in succession. Butterflies, also, as was ascertained by my friend Mr. Harris, are unaffected by the vapour of prussic acid. Edwards has remarked that many of the mammalia, when just born, are asphyxiated with much greater difficulty than adult animals of the same species, and that they are also more tolerant of lesion of the cerebro-spinal system, a circumstance which accords with a fact verified by Dr. Apjohn, that it requires a much larger quantity of prussic acid to kill a kitten than a full grown cat.

As the subject of poisons has incidentally engaged our attention, it just occurs to me that perhaps the following *general law* will be found applicable to

the effects they produce on the constitution, viz. *all poisons give rise to a train of symptoms, constituting a certain disease, of which we may always find a counterpart among those diseases which arise in the system from other causes.* Thus, symptoms exactly resembling those of *colica pictorum*, may occur where no lead has acted on the system; and the remarkable epidemic paralysis of the extremities observed in Paris in 1828, bears a striking resemblance to the paralysis caused by lead. If time permitted me to enter upon this subject, I think I could succeed in bringing forward examples of morbid states of the system in which the symptoms arising from mercury, and arsenic, narcotic poisons, &c. are produced totally independently of the ingestion of these substances; but, gentlemen, I have not at present leisure to discuss this question, and must, consequently, leave to others the confirmation or refutation of the opinion just suggested.

ANATOMY OF THE SHOULDER-JOINT.

To the Editor of the London Medical Gazette.

SIR,

You may perhaps consider the following remarks upon the accommodation of the muscles to the structure and motions of the shoulder-joint, worthy a place in your valuable journal.

I am, Sir,

Your obedient servant,

B. B. COOPER.

Feb. 14, 1831.

The great extent of motion of the two bones entering into the composition of the shoulder joint has been noticed by all anatomical writers, but without at the same time remarking upon the provision which nature has adopted for the security of this articulation against its frequent tendency to displacement.

Indeed, so far from any such observations having been made, it has been constantly pointed out as the least secure articulation in the body, leading us to the impression that nature had been negligent in providing the same ligamentous supports which are found so nume-

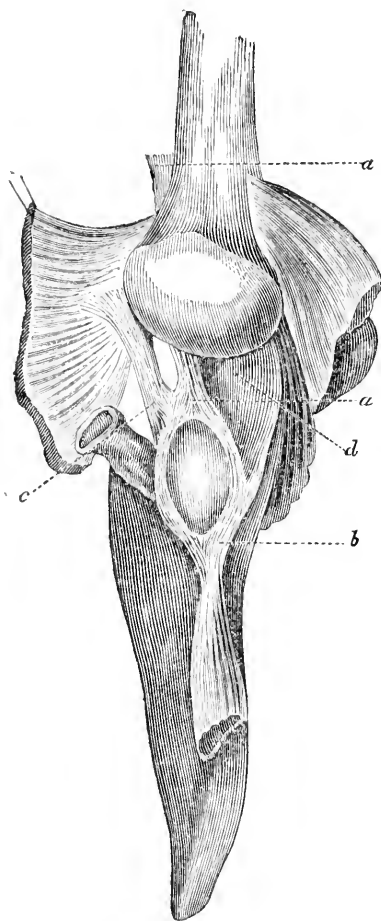
rously and efficiently adapted to the other joints.

It is true, from the recorded history of accidents, that the humerus is more frequently displaced than any other bone in the body, but it has yet to be proved that the frequency of this accident results from a want of natural defence: may it not be rather attributable to the greater exposure of the shoulder-joint to accidental force? as we instinctively throw out our hands in falling to save more vital parts from the dangerous effects of concussion.

It may then be asked by a cursory observer why this joint, if equally protected, should be more frequently luxated than the other articulations of the upper extremity. The answer to this is, that when falling forwards on the hands the shoulder-joint ultimately receives both the force of collision and the weight of the body. The usual anatomical accounts of the ligamentous structures of the shoulder-joint describe the capsular and glenoid ligaments as proper, and the tendon of the long head of the biceps as accessory, to this articulation: if, however, we carefully dissect the origins of the long heads of the biceps and triceps muscles, and the insertion of the subscapularis, we shall find the tendinous attachments of these three muscles intimately connected with, and in fact forming the fibrous structure of the glenoid ligament, while the articular cartilage of the glenoid cavity as intimately contributes to its elastic tissue: hence the term of fibro-cartilage given to this structure.

Let us now more minutely examine the attachment of these three muscles.

The long head of the biceps, *a*, arises by a tendon from the summit of the articular cavity of the scapula, splitting equally into two sets of fibres, which pass right and left around the cavity, to meet a similar disposition of the tendinous origin of the long head of the triceps, *b*, from beneath, thus forming (in conjunction with a strong tendinous slip, *c*, from the subscapularis muscle, as it passes through the capsular ligament) the elevated rim usually denominated the glenoid ligament: so distinct, indeed, is this arrangement, that a dissection conducted with common care will exhibit the three distinct ligaments as delineated in the accompanying diagram.



Before advertng to the use of the attachment of these muscles to the glenoid ligament, it may be right to mention that the spinati and teres minor muscles are also, through the medium of the capsular ligament, connected with, and capable of acting upon the fibro-cartilaginous rim of the glenoid cavity.

From the consideration of these anatomical points, it will be evident that in varied motions of the shoulder-joint, and especially when the upper extremity is forcibly extended, that the glenoid cavity will be enabled, through the medium of the muscles acting equally and simultaneously upon the glenoid ligament and humerus, to offer the best possible

adapting surface in every variety of direction, since during the action of any, or all the muscles, the head of the humerus is not only kept in apposition with the glenoid cavity, but at the same time, and by the same power, the recipient surface is *deepened*, by the extension of its fibro-cartilaginous circumference.

There is perhaps another use attributable to this arrangement, in diminishing the force of concussion when the humerus is driven violently towards the scapula, because the glenoid ligament, by the instinctive contraction of the muscles, is rendered tense and prominent, thus receiving a great part of the force which would otherwise be communicated directly and solely to the articular cartilages.

I feel that I have given but a slight sketch of a subject which I believe to be of some anatomical and physiological importance, and should it be considered so by others, I shall be most happy at any time to communicate the result of investigations I am at present pursuing in reference to other joints.

ON A

NEW AND SIMPLE MODE OF OPERATION FOR NÆVUS.

BY MARSHALL HALL, M.D. F.R.S.E. &c.

THE danger of hæmorrhagy from the excision—the excessive pain of the ligature—and the extensive scar left by vaccination, as these have been respectively employed for the cure of nœvus, induced me to consider whether some less objectionable mode of operation in these cases might be devised.

I communicated my suggestions to several eminent surgeons some years ago. I am not aware, however, that the plan proposed has been subjected to the test of experiment by any of them.

About nine months ago I was afforded the opportunity of examining a case of this kind, and of superintending the operation, by my valued friend, Mr. Heming, of Kentish Town.

This operation consisted in introducing a *couching needle* with cutting

edges, at one point of the circumference of the *nævus*, close by the adjoining healthy skin; from this point the instrument was made to pass through the tumor in eight or ten different directions, so as to produce slight incisions through its textures, parallel with the skin, but not so as to pierce the tumor in any other part. The first point of puncture was made the *centre* of the several rays of slight incisions effected by merely withdrawing, and again pushing forward, the little instrument, in the manner and in the various directions, just described.

The *nævus* was oval, and rather larger than a shilling; the couching needle was introduced at one point, passed as nearly as possible to the opposite edge of the tumor, without piercing it, and then in various directions, until eight or nine punctures, or rather incisions, traversing the texture of the tumor, but not the skin, had been made.

A little pressure was then applied over the tumor, by means of strips of adhesive plaister.

There was no pain, and of course no hæmorrhagy, and as the skin was only punctured in one point, there could result no scar.

I expected that inflammation would take place, and that a cicatrix would be formed, which from its solid texture and progressive contraction, would obliterate the textures of the tumor.

For some time—for several weeks—little appeared to have been effected. There was little or no change in the appearance of the *nævus* of any kind. Indeed it was almost concluded that the plan had failed—that the vitality of the part had been too low to yield the degree of inflammation required for the cure.

What a short time did not effect, however, a longer period accomplished completely. Half a year after the operation the tumor was found to have disappeared, and the colour of the skin to be nearly natural: the skin itself was perfectly preserved, free from any appearance of scar.

It is plain that the operation might be repeated at longer or shorter intervals, and with more or less numerous punctures, according to the degree of force apparently requisite to induce the given degree of inflammatory action for the obliteration of the tumor.

This mode of treatment might also

possibly be adopted for the cure of some of those congenital marks which disfigure the face, the instrument being cautiously introduced underneath, and parallel with the surface of the skin. If the loose vascular or cellular substance were thus obliterated, the colour would disappear.

But at this time I would confine myself to the consideration of the cure of *nævus*. To obviate the occurrence of hæmorrhagy, of pain, and of scar, is of sufficient importance, in itself, to attract the attention of surgeons in the treatment of this affection. But, besides this consideration, *nævus* sometimes occurs in situations, as in the tongue, the eye-lids, &c. not admitting of any other mode of operation. It does not appear that pressure forms any necessary part of the treatment. The cure in the case detailed was gradually effected, long after pressure had ceased to be employed.

14, Manchester-Square,
Feb. 12, 1831.

REMARKS

ON THE

MECHANICAL MEANS EMPLOYED

IN THE

TREATMENT OF FRACTURES OF
THE LOWER EXTREMITIES.

By W. H. NEVILLE, Surgeon.

It often happens in fractures of the leg, where both bones are broken nearly in the same relative part of their shaft, that whether the limb be laid on its side, in a state of semiflexion, or extended in the straight position, it is found difficult to keep the broken ends of the bones respectively in such accurate contact as finally to preserve the proper figure of the limb. The weight of the foot, and the hollow form of the leg at its back and lower part, together with the projection of the heel, constitute some of the difficulties, both in simple as well as compound fractures; and a reference to the anatomy of the bones, as well as to the soft parts, will shew us that such difficulties are to be expected. In compound fractures, too, a necessity may arise to make frequent changes of

dressings and bandages, and this is seldom accomplished without a degree of disturbance which it would be very desirable to avoid. The absolute necessity of occasionally moving the patient in bed, is another source of disturbance to the fracture, and the pressure of splints against some prominent part of the limb, in order to give proper stability to the whole, is a matter very annoying, and very often complained of.

In the endeavour to obviate some of these difficulties, and to fulfil the primary purposes of the surgeon simply and effectually, I have constructed a new sort of splint for the leg, the utility of which I have proved in some very bad fractures, to the satisfaction of several professional friends, besides having received the complimentary testimony of other surgeons who have employed the same plan in their own practice. I have shewn the splints to many surgeons of great experience in military, naval, and private practice, and in every instance they have expressed the most decided approbation of them, both in regard to the accuracy of their mechanical power, and their ability to meet the pathological requirements of fracture.

I am, therefore, induced to publish this account of them, in the hope that they may become useful auxiliaries in many instances; and I shall be highly gratified to find that a more extensive trial may confirm the favourable opinion which so many have already expressed. The plan of the instrument is remarkably simple, and the materials of which they are composed are very durable.

Mr. Thompson, of Windmill-street, to whom I have given the plans, and any advantages that may arise therefrom, has taken great pains to manufacture the splints neatly, and he has spared neither trouble nor expense in procuring a set of engravings to accompany this paper, so as to exhibit and explain the matter pretty accurately.

I need only say, therefore, that the splints are made of iron, and the padding of flannel, eight times folded, and enveloped in a cover of linen, or chamois leather. The substance of the under splint is such as to bear the weight of the limb easily, and yet to bend, so as to meet any shape that may be required. The substance of the side splints is almost the lightest that is to be obtained,

and such as will enclose the limb laterally with great exactness, and maintain its shape without any painful pressure. The padding is sewed on the splints through holes bored in pairs, at proper distances.

It is thus assumed that a flexible splint, with soft and regular padding, will perform its office more accurately, and with less pain to the patient, than an inflexible splint and graduated cushion.

Several different sizes will, of course, be required to meet the length and width of different limbs from childhood to the adult age—as the object is to provide a firm and easy resting place for the limb, additional to the pillow, by carrying a splint at the back of the limb, from the point of the toes half way up the thigh; to retain the limb thereupon in its natural form, by fastening the foot and ankle to one end by a figure of 8 bandage, and to extinguish for a time the action of the knee-joint, by binding it with a broad linen roller, moderately tight only, upon the other end of the splint, carrying the roller a little below the knee, and as far above, on the thigh, as the splint extends.

The side splints will assist in maintaining the accurate position of the limb, as from their flexible nature they will accommodate themselves to the existing state of the limb, and having a bearing on the foot part of the under splint, and extending thence above the knee, they will yield an efficient and accurate support in their whole line.

A little oiled silk being laid on the back splint, under the fractured part of the limb, and the 18-tailed bandage upon this, the latter may be changed at pleasure by means of a spatula, or what in many cases is easier, the 18-tailed bandage may be altogether applied under the back splint, and yet encircle the limb with sufficient power.

This arrangement of the fracture will provide for, 1st, the easy and natural position and length of limb; 2d, the necessary change of dressings; 3d, passive motion, without disturbing the fracture. But as there is a great variety in the nature of fracture, and as all mechanical means are limited in their power, so in those which I have the honour to submit, there will arise occasional difficulties in adapting neatly the means to the end we have in view.

In putting up a fractured leg, as it is

termed, some surgeons make use of an upper splint to tie along the anterior part of the limb. In order to obtain much advantage from this, it should probably extend through the whole course of the tibia; but as the foot rises from the end of this bone at an obtuse angle, there is often much inconvenience felt by the end of the solid splint pressing against the instep: to obviate this, I have suggested a flexible splint made of very narrow strips of thin metal sewed on a pad, in imitation of the wooden splint: this may be turned up at the end, so as to accommodate the instep, and as Mr. Thomson manufactures it, the splint has a very neat appearance.

Of Fractured Thigh Bone.

From the diversity of means proposed for the management of fractured thigh bone, it may be inferred that this accident is a matter of serious consideration for the surgeon, and of this fact every man's experience will sooner or later convince him. Every eligible proposition for managing such cases is, therefore, a matter of interest to him who desires to perform his work neatly, as well as securely.

Those who have been accustomed to use the long splint, as it is called—a plan, I believe, emanating from French surgery—and who have witnessed the successful results of its operation, will not readily be persuaded to abandon it, in the majority of cases, for any other means. Admitting, then, the preference which many surgeons entertain for this instrument, I have ventured to think that the alteration I have made therein will be received as an improvement; such, at least, is the assurance which I have received from persons practically competent to offer an opinion.

The instrument described in Mr. Thompson's plate is made of iron, and padded throughout, on the simple plan already described. It is strong enough to maintain the length of the limb when duly applied, and requires, like the old splint, the agency of additional short splints to compress the powerful muscles of the thigh.

In the construction of the old splint, a separate one was required for each limb; in this of mine, the shaft is moveable on the foot-piece, and the instrument is thus convertible into right or

left at pleasure. In the old splint, great distress was generally experienced from the pressure of the lateral foot-board, or from the stricture of bandages required to preserve the foot motionless;—in mine, by providing an easy and accurate resting place for the heel and lower part of the leg, and at the same time the sole of the foot having a support accommodated to its shape, the whole of these parts may be bound easily, yet securely, so as to constitute the one grand *point d'appui*: the shaft being then added, the ankle will be received against a soft cushion, and will escape all violent pressure, *whatever be the form or size of the malleolus*. In making the upper point of resistance against the ischium, one end of the bandage, pierced by the hook, may be thus neatly fastened thereon, and the few other turns will be easily received into the sinus which the hook makes with the shaft, and kept secure from slipping. The two principal points for giving the limb its due length being thus secured, it will naturally occur to the operator, that the next part requiring his attention will be the centre of the shaft, namely, that in contact with the knee. To those who may prefer wood to iron for the shaft of the thigh splint, I beg leave to say that Mr. Thompson has manufactured both, having adapted the iron foot-piece to a wooden shaft of the same size as in the old splint.

In conclusion, I may say that I have made a variety of experiments with different sorts of metal, and also with the same metal in various states of ductility, for the purposes above mentioned, and I have preferred such as are here described.

In what I have done, my aim has been merely to be useful, and if in the endeavour to multiply useful means, or to simplify such as would admit of improvement, I have effected any thing worthy of imitation in principle, or of adoption in practice, I shall be sufficiently rewarded for the pains I have taken.

Esher, Surrey,
February 14, 1831.

SECALE CORNUTUM.

To the Editor of the London Medical Gazette.

SIR,

THE professional interest attracted to the *secale cornutum*, and the remarkable properties ascribed to it, have induced me to direct much attention to its analysis.

I have begun by a course of experiments on the rye in its sound state, perfectly dried and subpulverized.

No. I.

1000 grains were macerated in cold distilled water: the water immediately became milky, and after some hours yielded of starchy matter 320 grs. The starch was separated, and the supernatant fluid, which was free from acid, having been distilled in a close vessel, the extract weighed 234 grs.

This extract had a peculiar gelatinous quality, and a *slightly* acrid and bitter taste: colour brownish yellow. The water brought over had the smell of bread, but no other sensible property was detected by the re-agents used.

The residuum, when dried, weighed 256 grs. making together, with the two quantities above mentioned, 910 grs. the remaining 90 grs. were lost, nor have I been able, by the utmost vigilance of attention, to account for this, or for a similar loss in every experiment to which the rye, whether in a sound or unsound state, has been submitted.

From the residuum of 256 grs. about 5 grs. of resinous matter were obtained by maceration in alcohol: the alcohol having been slightly tinged with yellow.

No. II.

1000 grains, macerated in proof spirit, yielded of starchy matter 494 grs. and of extract by distillation, 213 grs. the residuum was 250 grs. Loss, 43 grs.

No. III.

1000 grains were macerated in three pints of alcohol, and yielded of extract, of a yellowish appearance, and of a viscid and gelatinous quality, 26 grs.

The spirit was subjected, after distillation, to various re-agents, but without the detection of any extraneous matter.

The residuum weighed 960 grs. Loss, 14 grs.

The 960 grs. were macerated in three pints of distilled water, which became slightly milky, *but no deposit of starch took place.* The water was changed so long as the milky appearance continued, but still without any deposit; although, when the tincture of iodine was added, the presence of starch was indicated by a purple colour. The extract obtained by these repeated macerations weighed 160 grs. The residuum weighed 630 grs. Loss, 170 grs.

I proceed to the experiments on the diseased rye, which was also perfectly dried and subpulverized.

No. I.

1000 grains of the rye were macerated in cold distilled water; the water immediately became mucilaginous, was of a dull cloudy appearance, and a free acid was detected by litmus paper. After thirty-six hours maceration the clear decanted liquor was gently distilled, leaving of extract 178 grs. possessing a sourish animal smell, very peculiar and slightly acrid. The residual matter, when quite dry, weighed 786 grs. Having been lost in the operation 36 grs.

The water thus distilled, when examined by tests, was found to be free from acid. The 786 grains were digested in spirit of wine: the spirit became of a deep purplish red, and, having been gently distilled, left of extract 21 grs. The residual matter, when dried, weighed 748 grs. Loss, 14 grs.

This extract possessed a sourish animal smell, and was slightly acrid. The distilled spirit was free from acidity, and from all sensible properties.

The residuum of 748 grains having been again macerated in water, no sensible property of any kind could be discovered.

No. II.

1000 grains were macerated in proof spirit for thirty-six hours. The spirit became of a deep amber-colour, was somewhat acrid, but free from smell, and the presence of acid was detected. Being distilled off, there remained of deliquescent extract, of a sourish animal smell, 122 grs.

The distilled spirit did not possess any sensible property. The residuum,

when dried, weighed 820 grs. having imparted to the spirit during maceration 180 grs. of which were obtained in extract, as above-mentioned, only 122 grs. Loss, 58 grs.

The 820 grains were macerated in distilled water for several hours, imparting to it a dull, cloudy appearance, and shewing an acid when tried by the litmus paper. When re-dried, weight 795 grs. having imparted to the water 25 grs. of which 11 grs. only were obtained in extract. Loss, 14 grs.

No. III.

1000 grains were macerated for 36 hours in spirit of wine. The liquid contained acid, and became of a deep amber-colour. It was carefully distilled, leaving of extract, 73 grs. and of greasy matter, of an animal taste and smell, 39 grs. The residuum weighed, 840 grs. Loss, 48 grs. The residuum, re-dried, was macerated in distilled water, from 30 to 40 hours. The water was of a dull, cloudy appearance, and an acid was detected by the litmus paper. It was slightly tinged with yellow, and when distilled left of extract, 26 grs. the taste of which was slightly acid and bitter. The remainder, when dried, weighed, 748 grs. having imparted to the water, 92 grs. Loss, 66 grs.

No. IV.

1000 grains were macerated in a pint of distilled water thrice successively. The water of the first and second macerations was acid, which property was evolved immediately upon the application of the water. That of the third maceration was free, or nearly so, from acid. The three fluids were mixed and filtered, and nitrate of silver was added so long as precipitation ensued. The precipitate was collected and dried, and exposed to boiling nitric acid so long as any colour was imparted to it. The remaining matter was of a dull white. The dull white matter was washed with pure distilled water so long as acid was imparted to it. The collected mass, when dried, weighed from 7 to 8 grains, which were submitted to the action of the blowpipe, and silver to the amount of 4 grains, was revived. To ascertain the accuracy of the results, the experiment was repeated on a larger scale. One pound of the entire *secale cornutum* was placed under circumstances as described in operating upon

1000 grains, with the additional precaution that the precipitate obtained was dissolved in pure ammonia, filtered, and nitric acid added in excess:—a white precipitate instantly ensued. The precipitate was washed in distilled water, and dried. In some hours the matter became of a bluish, or pale slate colour. The flame of the blowpipe was used, and the silver revived, proving the acid in *secale cornutum* to be muriatic.

These experiments shew that starch abounds in sound rye, but that its presence is scarcely discoverable in the unsound.

That the unsound rye contains a large proportion of resinous matter, the sound very little, and that the unsound contains a greasy substance, resembling animal matter in taste and smell, not found in the sound rye.

That the unsound rye contains a free acid, none being found in the sound; and that muriatic acid was present. May not the great change in the grain, consisting principally in the conversion of the starchy into resinous matter, and a substance resembling animal matter, be ascribed to the economy of the plant having been affected by the presence of some insect, or its larvæ? A change so remarkable as that which has been demonstrated, combined with the consideration of the extraordinary properties of the changed, or diseased rye, when used medicinally, lays claim to reflection; and I should be gratified to find that this communication had been the means of drawing the attention of your readers to the investigation of this interesting subject.

Much variation has been found in experiments tried on the grain taken from different parcels, arising, no doubt, from the various stages of disease in the grain.

I am, sir,
Your obedient servant,
R. BATTLEY.

Laboratory, Ophthalmic Hospital,
Moorfields, 19th Feb. 1831.

DR. ELLIOTSON'S POLITICS.

To the Editor of the London Medical Gazette.

SIR,

DR. ELLIOTSON in one of his clinical lectures, so remarkable for their intelligence and practical information, has taught us the best mode of destroying

pediculi; and he has wittily seized the opportunity of letting us know what are his private opinions respecting Poland and its insurgent inhabitants: "I wish it were in my power to liberate all *Poles* as easily from their Russian foes." (See Clinical Lecture, Med. Gaz. Jan. 29.) This is a political surmise dexterously appended to a medical fact. The question, indeed, may be justly proposed, whether a subject has a right to assert and vindicate what he conceives to be his rightful liberty; or, whether a monarch has not also an equal right to maintain the government of his own kingdom, and his own subjects? but this is a question which ought not to be agitated, or whispered, over the bed of a patient; and it may be strange to hear a political sentiment, however minute, issue with authority from the wards of St. Thomas's Hospital. We smiled contemptuously at the unruly disposition manifested by the students in medicine of Paris; and it may be as well not to divert, even by a word, the sober-minded English boy from the single object of his pursuit—medicine as a science.

"Ne, pueri, ne tanta animis assuescite bella;
Non patriæ validas in viscera vertite vires."

The acute remark of a teacher is seldom forgotten; and we well know, and admire, the animated conversation and courteous manners of Dr. Elliotson. As men of science we belong to no party, and to no faction; and our only wish can be to secure and cultivate that freedom of thought and action which alone is conducive to the peaceful pursuit of philosophy. As medical men our office is to do good in particular instances; and let us entirely forget the passionate conflicts arising from political intrigues while sedulously attending to our own task of ministering, and making known, the universal blessings of humanity. *Hæ tibi erunt artes.*

I am, sir, yours,

Ω. Φ.

Feb. 1st, 1831.

INSTITUTE OF FRANCE—ACADEMIE
DES SCIENCES.

Jan. 31, 1831.

*Some new Remarks on Torsion of the
Arteries, by M. Amusat.*

M. AMUSAT read a paper on certain new facts illustrative of the advantages of *torsion*. After reminding the Aca-

demy that, on the 21st Aug. 1829, he laid his first researches on the subject before them, he said he wished to call the attention of the meeting to some patients of his, whom he introduced. Three of them were children of seven, nine, and twelve years of age respectively, who had had their right thighs amputated all about the same time, for white swelling, with caries of the knee-joint. The fourth was a man of more than fifty years of age, the extremity of whose humerus was shattered by a ball in the last days of July. He had long resisted having amputation performed in the shoulder-joint, and it was not till the twenty-sixth day after the wound that the operation was permitted to be accomplished, and when an abundant suppuration and slow fever had been for some days threatening the life of the patient.

In all the four operations the arteries were twisted, and the patients got well without the least secondary hæmorrhage. In the case of the youngest the wound was healed by the first intention in seven days, without the appearance of a single drop of pus.

M. Amusat has also twisted, on various occasions recently, arteries of less consequence; such as those divided in amputation of the breast, in operations for hernia, and for the stone.

Now that the advantages of torsion have been so fully demonstrated on the human subject, the method having been employed in so many instances, the author considers it needless to refute the little objections which are still made to it; he thinks torsion as superior to even the best mode of ligature at present employed as Ambrose Paré's invention was to the actual cautery, when that celebrated man substituted the ligature for the white-hot iron.

The principal advantages afforded by torsion over the ligature, are, that torsion may be performed without an assistant, that it is never followed by secondary hæmorrhage, and that it permits, in the fullest sense of the word, union by the first intention. In *tying* the arteries, a thread must be left which always interrupts, or at least is completely useless towards, the cure; in *twisting* them, we imitate what nature does when they are torn. In twisting the cellular coat we only aid the result of the latter accident, for when arteries are torn it is the cellular coat that arrests the flow of blood and favours the for-

mation of the clot: this is a much more simple account of the matter than to attribute the cessation of hæmorrhage, after a violent laceration, to the *spasm* or *erethism* of the torn arteries: and this remark led M. Amusat to another very important one, connected with practice; and that was, that the same phenomenon was observable in the division of arteries by a cutting instrument—for every time that an incised artery ceases to pour out blood, it is in consequence of a clot being formed in the cellular coat, and this clot is the most indubitable mark of the orifice of the artery.

“In conclusion,” says M. Amusat, “I will be bold to say that any man who has even once witnessed the experiment of torsion performed on living animals, will be convinced of its perfect efficacy, and complete superiority over the method of ligature. After an artery has been twisted, the end of it may be dissected, and it may be isolated to a great extent. It may be observed pulsating with every beat of the heart; it may be taken freely between the fingers; it may be pulled about without fear; and, in fine, it may be taken in a forceps and *detorsion* attempted, but it will be found to be in vain.”

M. Amusat's method has been tried with success by MM. Waust and Anciaux, at Liege; Fricke and Schruder, at Hamburg; and Dieffenbach and Rust, at Berlin.

ANALYSES & NOTICES OF BOOKS.

“L'Auteur se tue à allonger ce que le lecteur se tue à abrégé.”—D'ALEMBERT.

Précis d'Anatomie Pathologique. Par G. ANDRAL, Professeur à la Faculté de Médecine de Paris, &c. &c. 1829.

A Treatise on Pathological Anatomy. By G. ANDRAL, Professor to the Faculty of Medicine of Paris, Member of the Royal Academy of Medicine, of the Council of Health, &c. &c. Translated from the French by RICHARD TOWNSEND, A.B. M.D. M.R.I.A. and WILLIAM WEST, A.M. M.D. M.R.I.A. Vol. II. 8vo. pp. 808. 16s. 1831.

ANDRAL's Pathological Anatomy is justly regarded in France as a stan-

dard work, and the great mass of valuable matter it contains fully warrants the translators in presenting it to their countrymen in an English garb. The first part of their translation was given to the public last year; the second, which includes the two remaining parts of the original, now lies before us. The first volume is devoted to *general* pathology, and is chiefly occupied with discussions on the nature and progress of diseased actions; the second volume relates to *special* pathology, and describes individual changes in the several organs. The system considered as a whole is elaborate—probably the best that we possess; but it is loaded with clumsy nomenclature, which renders it less attractive than it would otherwise become. The translation is extremely well executed, yet is but little known, a circumstance which we ascribe in great measure to its having been hitherto incomplete; now, however, that this objection has just been removed, we are desirous of recommending it to the notice of our readers, particularly among students, and we shall give in the present article such a digest of one part of it as may be sufficient to enable them to form a pretty correct idea of the manner in which the subjects are handled.

The name of Andral holds the highest rank among the French pathologists of the present age. Corvisart, Bayle, Laennec, Broussais, Lallemand, Rostan, Louis, have each been known for their researches in some one particular branch—not that their knowledge has been limited to this, but that their reputation has been chiefly built upon it; of Andral alone we may say that his scrutiny has extended itself equally over the whole human frame. Nor is the work of Andral one of a mere anatomist, it is also that of an observant and skilful physician, who does not look upon any case as complete till its most intricate points are unravelled, but traces out the connexion between the symptoms which have presented themselves during life, and the appearances which are detected after death. Andral does not fall into the mistake, hitherto too common, of confounding morbid anatomy with pathology—he does not view morbid specimens merely as objects of natural history, nor limit his investigation to the physical peculiarities of the preparation before him, but he gives to morbid anatomy its best—its only valua-

ble application, by associating it with the phenomena to which such changes of organization have given rise in the living economy. In a word, he is a pathologist. We have remarked on former occasions, and the work before us offers an additional confirmation of the fact, that while the province of natural structure is occupied almost exclusively by professed teachers, our knowledge of morbid anatomy—and still more conspicuously of pathology—is almost wholly due to practical physicians. All the names we have above mentioned, as gracing the annals of French pathology by distinct works on the subject, are those of physicians; while to the same class belong various others, who have gained a name by numerous occasional papers: such are Bretonneau, Bouillaud, Gendrin, and Reynaud. No also in this country, while systematic works on general anatomy of the highest and most standard value are due to the labours of those who have devoted themselves to lecturing—that is, to surgeons—the physicians have pre-eminently taken the lead, or rather have entirely occupied the field of morbid anatomy and pathology; so far at least as we are to judge from the works which have appeared in the English language. Witness the names of Baillie, Farre, Hooper, Bright, Armstrong, and Elliotson; not to omit the highly important pathological essays on the heart, published in this journal, by Dr. P. N. Latham, and those on the ovary by Dr. Seymour. The only attempt worth mentioning since the days of Baillie—for Mr. Wardrop's edition is little more than a reprint—to form the scattered materials into a general system, is the work of Dr. Craigie; nay, the translators of such works are also physicians—to Dr. Townsend and Dr. West we are indebted for the English version of Andral. A coincidence so repeated is not the result of accident, but is the natural consequence of definite and intelligible causes. The *pure* surgeon has his attention directed especially to those diseases which occupy external parts—to the local malady he is accustomed, from the very commencement of his career, to attach the first rank in importance. Now such affections are the subjects of a different kind of investigation from that which is favourable to pathological knowledge, as connected with internal diseases. *Those* are general-

ly objects of sense—can be subjected to a mechanical kind of examination—can be seen and felt; their existence in a given place can generally be determined with mathematical certainty, and their presence being recognized, the attention is subsequently directed to watching their effects: *these* again have their seat internally, are always more removed from examination—often entirely so—and attention is first directed, not to the cause, but to its effects—to certain symptoms from which the nature of the cause is inferred. That an ulcer exists on the leg is matter of direct and obvious knowledge; that an ulcer exists in the lungs, or in the bowels, is a matter of inference, but, thanks to the labours of the pathologist, of inference so strongly supported as almost to amount to certainty. The route in which the train of reasoning proceeds, it will thus be perceived, is entirely different in the two cases: in the one we proceed from a known cause to mark successive effects; in the other we follow back certain phenomena—often sufficiently obscure—to ascertain their hidden cause; and as there must be a constant effort under such circumstances to connect symptoms with changes in the organs to which they refer, so probably the fact may thus be explained, that to physicians we are indebted for almost all that is known of the pathology of internal disease.

But it is time that we should turn to M. Andral and his translators. The volume which has just issued from the press is the second of the work, and is devoted to “special pathological anatomy;” in other words, to an account of the numerous morbid changes of structure to which the various organs of the body are liable.

The following is the order in which the subjects are considered:—1. Digestive Apparatus. 2. Circulatory Apparatus. 3. Respiratory Apparatus. 4. Secretory Apparatus. 5. Apparatus of Generation. 6. Apparatus of Innervation. Some account of the manner in which the first of these divisions is handled, will be as much as the limits of the present No. will admit of.

ALIMENTARY CANAL CONSIDERED IN A STATE OF HEALTH.

The alimentary canal is first considered in a state of health, and simple as this subject may appear, there is scarcely any point in anatomy with regard to

which such contradictory opinions have been advanced. So common, indeed, are morbid changes in the stomach and bowels, that they have often been looked upon as natural appearances. It is certain, too, that the aspect of the mucous membrane lining the tube differs during life and in death, according to various circumstances unconnected with disease; such as the state of chymification at the time of dissolution, position, the presence of certain gases, &c. It may thus present any of the tints intermediate between a deep red and almost perfect whiteness, and such portions of red as are present may either assume the form of points or ramifications, or be diffused in spots or streaks. Nor is this all; for, after a certain time, when putrefaction begins to operate, the blood soon exudes through the sides of the vessels, staining the surrounding tissues, and communicating to them various hues, corresponding to the extent to which the process of extravasation has proceeded. Another familiar discolouration is the yellow staining of the right half of the stomach and of the duodenum, dependent on the bile, and the only remark we have to make upon this is, that it would seem, when particularly well marked, to be sometimes at least dependent on the presence of acid in the stomach. "More than once (says Andral) I have found the whole internal surface of the right half of that viscus stained uniformly of a fine ochre colour. I am inclined to think that this may be owing to the presence of an acid in the stomach, which must have a tendency to separate from the bile its yellow matter, which in this free state is more readily imbibed by, and combined with, the adjacent tissues. It is thus that some explain the yellow tinge observed on the mucous membrane of the duodenum in certain cases of poisoning by sulphuric acid."

The thickness of the membrane in its natural state is another important question, and it is essential in judging of the presence of disease to be aware, that in health the membrane varies in this respect at different points: the maximum thickness exists in the duodenum, and minimum in the colon. The consistency of the gastro-intestinal mucous membrane is for the most part in direct proportion to its thickness, and is therefore much more considerable in the

pyloric than in the splenic portion of the stomach, and in the duodenum than in the colon. In the stomach, if due care be observed that in incising it we do not penetrate the subjacent tissues, considerable shreds may be elevated with a forceps, and portions of a certain size may thus be detached from the duodenum; but in the rest of the bowels, the rectum only excepted, the membrane breaks and tears when we thus attempt to raise it.

But the mucous membrane of the alimentary canal may also become softened after death, and this may take place either slowly from putrefaction, or rapidly from some less obvious cause. The latter cases have by many, and more especially in England, been attributed to the solvent power of the gastric juice—a doctrine concerning which Andral expresses his wish for further data, before coming to a decision.

In the healthy state there are only two parts in which "very manifest" follicles are discerned; viz. round the cardiac orifice of the stomach and in the duodenum. In the ileum, at its inferior portion, the parietes of the bowel seem at certain parts to be thicker than elsewhere, and if held between the eye and the light, are found to be less transparent than usual. It is here that Peyer's glands make their appearance in some subjects. In children, however, these follicles are much more developed and more numerous, presenting the appearance of small round bodies, of a white or grey colour, with a central orifice and a grey circumference.

"As I have found these patches (the *aggregated glands of Peyer*) thus far developed, and thus coloured, in children who died suddenly in consequence of accidents, or of diseases that have no relation whatever to the digestive apparatus, I think I may assume as a fact that they do not constitute a morbid state in childhood. But are they a proof of disease in the adult? It is true enough that, in many persons that die of or with chronic diarrhoea, the most remarkable and striking change found in the alimentary canal, is an unusual development of the follicles, resembling what we have just now seen existing naturally in children. Besides, in many other individuals who died of some other diseases while recovering from gastro-enteritis attended with severe symptoms, such as are termed adynamic and ataxic, I

have often found on the internal surface of the alimentary canal, near the end of the ileum, the aggregated glands of Peyer appearing in the form of vast patches dotted with black. I believe that, in this latter case, the dotted patches discovered on examination after death, indicated that the follicles were in a state of hypertrophy, resulting from the recent irritation that had affected them. But this state of hypertrophy might have continued without producing any bad effect; as is proved by the fact, that in many other adults the follicles are found in a similar state, although at the time of their death there had been no sort of disease in the *primæ viæ*."

With respect to the tissues subjacent to the mucous: the cellular ought to form a white layer "of a pretty great density," which may or may not be traversed by veins containing blood; the muscular coat should be pale, like the muscles in white-blooded animals; it should be thickest at the pyloric end of the stomach and in the rectum, and throughout its thickness should be in proportion to the degree of intestinal contraction. The cellular tissue between the muscular coat and the peritoneum should be almost imperceptible. The quantity of mucus lubricating the inner surface of the bowel, should be such as to admit of being collected by scraping it lightly with the scalpel, and should present a greyish viscid appearance.

The preceding observations give an outline of the principal circumstances important to be known, as connected with the healthy state of the alimentary canal, the standard with which all deviations from it must be compared, and therefore essential to be fully understood. We have given a sketch merely; to the work itself we refer for the details, which are given with minuteness, but at the same time with remarkable clearness and precision. We now turn to

THE ALIMENTARY CANAL CONSIDERED IN A STATE OF DISEASE;

and the first portion we have here to notice is, that in many instances the "alterations which belong to the morbid condition so exactly resemble some of the appearances of the healthy state as modified by one of the causes already enumerated, that it will be impossible for us to distinguish them." Under

such circumstances we can only wait till the accumulation of facts shall dispel the doubt.

In speaking of the diseased states of the alimentary canal, M. Andral divides the subject into five separate articles, whereof the first refers to

Lesions of Circulation.

Hyperæmia, or vascular injection, first spoken of by M. Andral, is one which, we have already seen, may exist in almost any form without necessarily marking the presence of disease, and therefore something more than mere redness of any shade, or to any extent, must be present to demonstrate the previous existence of morbid action. This hyperæmia is generally limited to the inner membrane, and hence we never can judge of its presence or absence without laying open the bowel. The appearances assumed by hyperæmia resulting from the introduction of acrid poisons, or other circumstances manifestly productive of disease, vary considerably, sometimes presenting an arborescent form, or assuming the arrangement of network; at other times being punctated; at others, blood is effused beneath the mucous membrane, or on its free surface. When it assumes the punctated or dotted form, the injection is sometimes confined to the villi so entirely that there is no trace of it on the membrane from which they arise: each point is formed by the injected summit of one of the villi. But again, "instead of a red colour, the villi of the gastro-intestinal mucous membrane not unfrequently present a brown or even a deep black tint. I have often found the internal surface of the alimentary canal of a fine black colour, in the bodies of individuals that have been labouring under chronic diarrhœa; and in some cases of this description I have satisfied myself that this unusual tinge was situated in the villi of the mucous membrane. I have also frequently found the villi in the alimentary canal of the horse of a beautiful ebony black colour. This black tint of the villi runs through a series of shades into the red, which we may perceive becoming insensibly brown, and gradually arriving at the deepest black. We have elsewhere seen that there is often no other condition requisite for this change of colour to take place, than a simple diminution in the velocity of the capillary circula-

tion. I believe, further, that this black tint of the villi, as well as the red, may be the result of irritation of the digestive mucous membrane, as is proved by the fact, that in most of the cases in which I observed such a tint, it was in the bodies of persons who had been affected with diarrhœa for a greater or less length of time."

When hyperæmia is confined to the capillaries, it is regarded by Andral as belonging almost exclusively to a state of "irritation," and to be a pretty sure proof of its existence: when it extends to the capillaries and large vessels, or to these last only, he holds it to be common to irritation and mechanical obstruction. The injected state of the larger vessels alone, he conjectures to be in many cases indicative of irritation that has passed away, as some large vessels will remain loaded with blood on the conjunctiva after the turgescence of the minuter ramifications has subsided.

It has been very common to judge of the acute or chronic nature of a disease in the alimentary canal by the colour which the mucous membrane assumes, and the brown, grey, and slate colour are especially looked upon as indicating the latter state: but it is certain that on the one hand irritating substances, proving speedily fatal to life, frequently produce these tints; while, says our author, "as to the red colour, it belongs no less to chronic than to acute irritation. I shall bring forward no other proof of this than the case of a man, fifty-one years of age, who died at La Charité after labouring under diarrhœa for eight months. We observed him wasting away without the abdomen ever feeling painful, or fever lighting up for a single instant. He had only four or five liquid stools, and often less, in the four-and-twenty hours: he had the greatest repugnance to all kinds of food. On opening the body, the internal surface of the stomach was found to be of a brown colour, which was situated in the thickened mucous membrane. The mucous membrane of the small intestine was of a deep red, in about the upper four-fifths of its extent: the lower fifth presented merely a slight appearance of injection. The internal surface of the cæcum was white. The mucous membrane of the colon and of the beginning of the rectum was spotted with a multitude of red patches, of an oval or roundish form, which complete-

ly intercepted the light. Thus, all that was found in the body of a man who had died in the last degree of marasmus and exhaustion, was a little more blood in the gastro-intestinal mucous membrane than usual, tinging that membrane brown in the stomach, and red in the rest of the alimentary canal."

Anæmia consists in extreme paleness of the alimentary canal throughout, or in parts only. It is chiefly met with and is not rare in the bodies of those who have died in a state of exhaustion, from some chronic disease, or from fever, and in this latter case the ulcers, so commonly met with in the bowels in this complaint, are as pale as the surrounding textures.

[To be continued.]

MEDICAL GAZETTE.

Saturday, February 26, 1831.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

SOME REMARKS ON THE LATEST TRIAL OF ST. JOHN LONG.

WE look upon the whole series of inquests and trials to which the malpractices of this notorious quack have been submitted, as highly valuable in a medico-legal point of view; the last, however, peculiarly so, from the circumstance of its having been tried by a judge than whom there is none other on the bench more capable of throwing light upon the state of the law, as it regards criminal malapraxis in medicine. On the trial of the same individual in November last, for the manslaughter of Miss Cashin, much doubt was expressed by his judges (Justice Allan Park and Baron Garrow) as to the extent to which a medical impostor like Long was amenable for his doings. Baron Bayley has cleared up much of the mystery.

We do not think it necessary to load

our pages with the evidence on the present occasion, as it is, in fact, identical with that given at the inquest on the body of Mrs. Lloyd, and for which we refer our readers to p. 222 of the present volume; but we shall, from personal observation, record a few particulars connected with the course of the trial, and preserve an ample abstract of the charge and other remarks of the learned Judge, because, as we have said, we attach so high a value to them.

When the Coroner's jury sat on this case, they found a verdict of guilty against St. John Long, distinctly on the ground of his "gross ignorance." The recent jury at the Old Bailey, *doubted* upon the same evidence; and willing, as in justice bound, to give the prisoner the benefit of that doubt, had no alternative but to return a verdict, which would appear, to superficial minds, to be the reverse of that which had been already found. But the shades of guilt and innocence are various, yet far from indistinct; and it is one of the defects of the legal forms in our criminal jurisprudence, to admit no intermediate award. The Scottish form, even, is better—*Not proven* would most probably have been the verdict of the same jury had the Scottish formalities been observed.

But Long has escaped this time, and, from being the trembling prisoner in the dock of the Old Bailey, is now once more the gasconading quack of Harley-Street. Our remarks, of course, are not directed to him; shame cannot reach him, and he must be utterly insensible to the feelings of compunction and remorse. None but a hardened impostor of the most impudent description could bear to look in the face the friends and relatives of those whom he has destroyed. What other audacious person could attempt to do it, than he who after having been convicted by five juries is only ac-

quitted by a sixth, as it would appear, from some minor points of circumstantial evidence construed in his favour? That this last conviction has not taken place, we by no means complain; for, however useful it might have been to transport such a character out of the country, it was still unnecessary (and inexpedient, considering the state of the laws) for any such object as the convincing of rational and unprejudiced minds. It might—indeed, though we confess we should rather despair of any such result—work a beneficial effect upon the minds of the idiots who gave their evidence with so much fervour in his behalf.

We have said that he escaped upon a *doubt* founded on some minor points of evidence: may we not go farther, and say that he should have been found guilty, consistently with the Judge's charge, and by a jury better prepared to weigh the evidence set before them? Let us read the comments of the presiding Judge. We give them as reported in the public prints, but we must observe, by the way, that the report is a most imperfect one, the deficiencies of which we shall endeavour to supply from our own personal recollection. In reply to the quibbles of Messrs. Alley and Adolphus, who were attempting to argue that there was no count in the indictment under which the prisoner could be found guilty, inasmuch as there was no imputation of *want of skill* in his treatment of the patient—

Mr. Baron Bayley held that any man presuming to meddle with what he did not understand—unacquainted with principles—venturing to prescribe for the sick, incurred a heavy responsibility, and indisputably in some cases was guilty of manslaughter. Thus, if a man were to say laudanum is an exceedingly good medicine, no one could question his assertion; but were he to administer a teacupful of laudanum, was there any man in his senses would

say that such a person was not guilty of manslaughter? Were such a dose to be administered to the strongest man, he would in ten minutes be a corpse. Surely, then, the person who should so deal with that valuable medicine or deadly poison—for it was the one or the other, according to the quantities in which it was administered—would, in the eyes of all men, be guilty of a most criminal act, and would be pronounced by every lawyer to have committed the offence of manslaughter. The same observation applied with equal force to any misapplication of any medicine, when the party misapplying it had neglected to make himself previously acquainted with its properties. As to the willing mind of the patient, he thought that circumstance by no means fatal to the present prosecution; for though no action of trespass might lie, it might be an offence against the criminal law.

The principle of law laid down by his Lordship was this—we heard it with our own ears, and we distinctly pledge ourselves for the accuracy of *our* report—"that if one man inflict upon another a wound, not in itself mortal, but which becomes mortal from subsequent ill treatment (even, be it observed, from subsequent *ill* treatment), as it would have been needless to have had recourse to any treatment at all, but for the infliction of the wound, he who gave the wound is to be held guilty of felony." Upon this principle, what can be more clear than that the verdict of the jury should have been just the reverse of what it has been? What rational person (always excepting the infatuated dupes of St. John Long), one might naturally ask, after reading the evidence of Messrs. Campbell, Vance, and Brodie, could doubt that the unhappy lady came by her death in consequence of the malpractice of the prisoner? Yet the jury *did* doubt; but it only shews that however, in ordinary cases, the verdict of twelve common men may be valuable, in cases where a question of professional skill or criminal ignorance is to be decided on, a

jury of men of science, or at least of men of a better sort of education, should be preferred.

Now let us read the printed report of the Judge's charge—than which, as it stands, nothing can be more meagre—a fact which may very well be credited, from the circumstance that it occupied nearly an hour and a half in the delivery, though it may here be read deliberately in five minutes. The reading of the evidence, to be sure, occupied—say, half the time; yet the necessarily meagre nature of the report is still a fact; the veracity of the substance, however, of what is here given we do not mean to deny.

Mr. Baron Bayley then proceeded to sum up, requesting the jury to dismiss from their minds all that they had heard or read out of court respecting the present case, and to confine themselves strictly to the evidence laid before them, and to that evidence alone. The indictment charged the prisoner with having killed and slain the wife of Colin Campbell Lloyd. If the gentlemen of the jury were satisfied that in the means which he had employed he had acted with a felonious intention, then they must find him guilty, and that without a moment's hesitation. But, on the other hand, they were to remember, that persons with the best intentions might be sometimes mistaken as to the effects of the remedies they might administer; and God forbid that felony should be imputed in all cases where ill success took place. The chief consideration for the jury was, whether or not the prisoner had in the present case acted with due caution, and been previously aware of the nature and effects of the substance he was applying, and also whether he had shown sufficient skill and knowledge to estimate the effects of such a remedy upon the individual constitution of Mrs. Lloyd. To state the question briefly, if they thought he had betrayed gross ignorance, gross rashness, or want of thought, they must find him guilty. It was clear enough that, subsequently to the application of the remedy, the prisoner was not guilty of any negligence; but the question was, whether, in the first instance, he was

rash, ignorant, and unskilful. He then laid before the jury a short historical view of the evidence, and proceeded to say, that if the jury should be of opinion that the death of the deceased took place from the wound, they must give their verdict against the prisoner, but they must be fully satisfied that the death arose from that alone. If, however, they entertained any doubt about it, then they would give the benefit of that doubt to the prisoner. Another point for them to consider would be, whether the application which they had heard of in evidence was of an improper nature to administer to a person; for, if it were not, then the prisoner could not be charged with any bad intent. If, however, they were of opinion that the prisoner was rash in making the application, then he had been guilty of a felonious act. The two points, therefore, he begged to remind them of were—Had the death of Mrs. Lloyd proceeded from the wound, and was the application that caused that wound of a felonious nature? The learned Judge then proceeded to read over the evidence. The learned Judge remarked, on reading the evidence called for the prisoner, that although evidence of general skill, humanity, and care, was certainly receivable in such a case as the present, still what was done in one case was not to be adduced as a criterion of what was done in another and subsequent transaction. Still, however, the jury should take the evidence into their consideration, and ask themselves whether it was likely that if he showed proper care in one case, he would not do the same in another? If after taking the balance of evidence into consideration, the result in their minds was doubt, then they would give the benefit of that doubt to the prisoner, inasmuch as he had received an excellent character for skill, and general care, and humanity. The points for their consideration as particularly applicable to the question before them were, was the death produced by the application that was made to the breasts of Mrs. Lloyd on Sunday, the 10th of October; and was that application rashly made, without a reasonable degree of caution. They must be satisfied as to what was the exact state of the wound when taken under the care of Mr. Campbell, and how it had been in the earlier stages of the transaction. If, on due consideration of all these cir-

cumstances, the jury had a perfect conviction produced in their minds that there was a want of care, and improper rashness in using the application in question, and that the use of them was the cause of Mrs. Lloyd's death, then the prisoner was liable to be found guilty, and he ought to be found guilty. But if they did not feel that full conviction, then the prisoner was entitled to that doubt on the points that he had already brought before their notice.

Our space will not permit us to carry our remarks to a greater length on the law of the case; but there were some circumstances which came under our observation during the trial, which we must not omit to mention.

The behaviour of the prisoner at the bar, we must say, was disgustingly indecent. He had his chair that he might sit down, and from former acquaintance with the situation in which he was placed, seemed to make himself quite at home. But what was most intolerably offensive in his conduct upon the occasion, was, that at the very time when Mr. Campbell was detailing, with appalling minuteness, the horrible condition of the patient's body—the destruction of the cellular membrane, &c.—when the narrative made even the most indifferent person present shudder—we turned our eyes to the dock to see how the accused bore the recital—*even then* we found him busily employed in *sugaring his coffee!* Whether this was from an effort on his part to affect the appearance of conscious innocence, or to escape betraying any thing like a guilty horror at that critical moment, we will not pretend to say; but it was one of the most beastly exhibitions of want of feeling that we ever witnessed in our lives.

When called upon for his defence, he evidently astonished the court by the monstrous assurance of his bearing; never was the true impudent quack more perfectly displayed. The poor persecuted individual complained to

the jury of being pursued by the envious—of being actually hunted down by the medical world—"and why?" said the prisoner: "because *I can cure their incurables*. I can cure insanity—they cannot. I can cure consumption—they cannot. I can cure mortification—but they cannot do it," &c. The injured man then proceeded to say that *he knew nothing of Mrs. Lloyd's death—he had nothing at all to do with it*; and this abominable lie he reiterated more than a dozen times. He next fell foul of Mr. Campbell; whom he accused of gross ignorance—the strongest testimony, by the bye, that appeared that day in Mr. Campbell's behalf—but Long went on to say that it was Mr. Campbell who should have been placed in the dock instead of him: it was Campbell who was ignorant—not Long, who was, in truth, amazingly knowing, having spent large sums *in erecting machinery in Harley-Street for the purposes of inhalation*. He declared with emphasis that his only object had been to do good to man—(how kind!) He never charged the poor a fee—(how singular!) He also protested, that even the night before the trial, a medical gentleman, of great knowledge and experience, had conversed with him at length upon the *theory of the nervous system*; and so high was his opinion of Long's attainments, that he was willing to vouch for his wonderful acquaintance with anatomy. Who was this medical man, we should be glad to know? Was it the *extraordinary person* to whom Capt. Lloyd refused admission when he called at the Captain's house to follow up Long's treatment? We should wish to know the name of St. John Long's medical friend, that we might estimate the probable value of his testimony. One anecdote more and we have done. When the jury retired at near nine, and the quack, surrounded by a number of his fair supporters, (for the court, as our readers know, was all day plenti-

fully filled with *ladies*) was, as might reasonably be supposed, trembling in the dock, we saw the fellow take a copy of his book—positively of that invaluable book, which we had the pleasure of being the first to introduce to public notice—and writing his immortal name in the fly-leaf, present it to a gentlemanly-looking person who was near him!

ANATOMICAL BILL.

ON Wednesday evening (9th) a short conversation was held in "the House," relating to this subject; from which it appears that the public have nothing to expect this session with regard to anatomical arrangements. Mr. Warburton explicitly announced his intention of not bringing forward any measure of the kind. We would not rashly impute to Mr. W., who has taken so much pains with the matter on former occasions, any culpable apathy, or feeling of over-timorous apprehension of the consequences of agitating an unpopular measure, but we must confess we more than fear that there exists, on the part of those who profess to manage and support it, a very manifest and extraordinary lukewarmness, to say the least of it. Mr. Warburton himself has not assigned any reason for his *present* abandonment of the measure. What he said in the House simply was, "that he did not intend to renew, this session, the introduction of the bill which he had formerly attempted unsuccessfully; but that *he did not abandon the measure*." This, truly, is very encouraging! But may we be permitted to ask why, if the honourable member despaired of being able to carry the old bill (as perhaps he had sufficient reason for doing), why he has not had a new one prepared, after an interval of nearly two years since the former one was thrown out? Was it that he could not get up a bill that would please all parties? Did the honourable member try?

Was it that parliament is likely to be too busy to entertain such a measure as the anatomy bill during the present session? Now, supposing even that there were such a press of business on the House—which, in point of fact, we utterly deny—we should be glad to know what and how many are the all-important and engrossing measures which should take precedence of the anatomical question? Why, no later than a night or two ago, the House was occupied with a five-hours talk over Lord Althorpe's withdrawal of the proposed tax on the transfer of funded property, which same withdrawal his Lordship fully announced before the said talk began; and numerous other instances of the pressing necessity under which the House labours, of saying, at least, if not doing, will occur to all our readers. Or was Mr. Warburton's reason this—that he could have no hope of convincing or soliciting with any success the mass of ignorance and prejudice that possesses parliament on the subject of dissection? Why this was no reason for giving the matter up. Nobody expects that impediments of this nature can be removed all at once; or that a point of so much importance can be gained without much perseverance and the patient endurance of many rebuffs. The time, however, will come, in spite of all opposition, when the measure *must* be entertained, and carried.

But though honourable members have no time just now to entertain *seriously* what may be truly termed “a question of life and death,” yet it seems they have time to wax witty on its provisions and its proceeding. The member for Preston was particularly brilliant and facetious on this occasion. After saying that *he* should oppose the measure, the honourable member added, that, “if it were proposed that the bodies of the (unclaimed) poor should be given up for dissection, he should move, as

an amendment, that every young surgeon, before he was allowed to handle a knife, should sign a record giving up his own body for dissection;”—thus reiterating the absurd proposal which has been answered a thousand times; as if (to answer it for the 1001st time) how little objection soever the *young surgeon* might have to devote his body to a useful purpose, he should still bind himself to break through his own principle of employing for anatomical purposes none but the *unclaimed*, totally regardless of the feelings of his surviving friends, who would most certainly not fail to claim him. But the joke of the matter our “honourable” friend reserved, by way of *bonne bouche*, for his conclusion: “he should also move, that, instead of the bodies of poor paupers in workhouses, those of the rich paupers—namely, the pensioners—should be given up for the purpose.”—(A laugh). How long shall we have to complain that there is no medical man in parliament, or at least no man of energy competently informed on subjects of medical polity, to rise in his place and put an immediate stop to such abominable babble?

COLLEGE OF SURGEONS.

As we have no need, heaven knows, to represent the late proceedings at the College of Surgeons as in any degree more irregular than they really were, we shall premise the observations which we have to make at present by correcting an inaccuracy in our notice of last week. A gentleman who was present, in describing the extreme irregularity of the proceedings, remarked, in illustration, that “the negative was not put of one question,” which we understood to mean that the negative was not put of any question; and acting upon this erroneous impression, added the supposed fact to our report, and alluded to it in our leader. It appears, however, that our informant did not allude to the

resolutions, (which, as we formerly remarked, were in themselves unexceptionable) but merely meant that the negative was not put of one particular question—namely, as to whether the business of the day should be interrupted by a member deputed to address the President on his entrance. On the establishment of this precedent, which was the real object of the whole proceeding, the affirmative votes only were called for, and the question declared to be carried unanimously, though the negative had not been put. One member, however, took the opportunity, notwithstanding, to express his unqualified dissent on the resolutions being presented to Mr. Keate as with the unanimous concurrence of all present*.

Mr. Keate was obviously placed in a situation of considerable difficulty, and we dare swear that none of the Council on that day envied him the President's chair. On such occasions, it is no doubt easy for an unconcerned spectator, and after the business is past, to say what ought to have been done, and probably we lay ourselves open to this comment when we express our decided opinion that Mr. Keate ought not to have received the resolutions in any capacity, official or otherwise; and this simply on the ground that the members were assembled for a specific purpose—that of hearing the Hunterian Oration—and for no other. When, in addition to this, it is considered that no meeting had been convened, so that the sentiments of the members of the College, as a body, could not have been taken—that the *meeting* had no chairman, and the resolutions no signature, we neither feel any doubt as to the propriety of refusing to recognise the pro-

ceedings—nor can we suppose that a simple appeal to the good sense and good feeling of those present would not have been sufficient to secure acquiescence in such decision, and obtain due support to the chair, occupied as it was by one not less entitled to respect from the public capacity in which he appeared, than on account of his personal character as a surgeon and a gentleman. It is proper to add, however, that the heading of the resolutions (the only objectionable part of the paper) was not read to Mr. Keate; while the language adopted was such as to lead him to believe that there had really been “a meeting of the members of the College of Surgeons,” not conceiving that the tumultuary audience then assembled was dignified with that title.

We regret that we cannot speak in terms of approval of the part taken by Sir Astley Cooper: his speech appears to us to have been made entirely *ad captandum*. No doubt he felt the justice of what he said in praise of the English surgeon; on that point, indeed, there can only be one opinion among professional men; but when he went on, to propose that delegates should be sent to treat with the Council, he certainly adopted a course of very questionable propriety. That Sir Astley should have spoken so confidently in the name of the Council, and should so unhesitatingly have made an offer so much at variance with the manner in which the affairs of the College have hitherto been conducted, is not less surprising than that his inconsiderate proposal should have been rejected. Had his suggestion been adopted, the doors of the Council chamber would have been thrown open, and will the distinguished baronet venture to say that they could ever again have been shut? Instead of closing at once with this unlooked-for offer, the dictator of the party chose to insist upon his own proposal, and thus has

* When this part of the Number was passing the press, we received a letter from Mr. King, for which we beg to thank him. He calls our attention to the mistake above-mentioned, and does us no more than justice in supposing that we had been led into it “unintentionally.” No difference of opinion on medical politics ever has, or ever shall induce us wilfully to mislead our readers on any point, however unimportant.—E. G.

placed it in the power of the Council to recover their ground, by refusing to entertain the resolutions—and this we doubt not will be the result.

Mr. Thomas addressed a few words to the audience, and nothing can more clearly show their state of excitement than the reception they gave him. There was nothing offensive in the matter or manner of his address;—he did but warn them that Sir A. Cooper could only speak in his private capacity, and yet he was hooted because the remark, though undeniably true, did not happen to be palatable!

We are among those who think that the Council would do well to cultivate a closer connexion with the members at large than they do. In mere policy, if not for any better purpose, they ought to make themselves well acquainted with the sentiments of that part of the profession over which they preside. Never, for example, was a greater blunder made on any such occasion than that into which Mr. White fell in his Oration. General usage, and we had supposed even a specific regulation, has hitherto confined the subject of this to John Hunter and others of the illustrious dead; but Mr. White, with singular want of discernment, chose to bepraise the living—and not the living merely, but those who were actually present—lauding them in hyperbolic terms, and placing them in the unenviable situation of hearing their praises sneered at in no ambiguous manner by the audience. But to return: the wishes and feelings of the general body ought always to influence the decisions of the Council, and no doubt would do so. But such sentiments ought to be demonstrated in some regular and becoming manner. If the members wish to express their opinions on any subject, let a meeting be regularly convened for the purpose, that all of them may have an opportunity of coming forward, if they be so disposed; and let

the business be conducted with the regularity and decorum which become the representatives of a learned profession. Resolutions so passed would be entitled to, and would command, respect. Among those who took part in the disturbance at the Hunterian Oration, there was not one individual known to his brethren as of weight or eminence in his profession; and to speak of such an assembly as representing the members of the College generally, is as absurd as to suppose the surgeons of London so lost to all sense of decency, propriety, and honour, as to acknowledge the political charlatan, who figured on that occasion, as fit to take the lead in a profession which has hitherto aspired to a high rank—in science as philosophers, and in society at large as gentlemen.

A meeting on the subject to which the resolutions referred, could have been held any where; but the precedent—the wished-for precedent of addressing the Council from the benches of the theatre, could only have been obtained where it was. As to the Naval Surgeons, their cause cannot possibly be served, and may be—we fear has been, injured by the interference. Before the disturbance at the College of Surgeons, proper representations had been made, and every thing was in a fair train for the removal of the grievance: and we believe that Mr. Keate has since personally used his influence in the highest quarters. But as that is often yielded which is sought only as a grace, which is refused if it assume the aspect of demand, so the breach of public decency and the bad eminence of those who made a party question of it are likely to throw obstacles in the way which did not previously exist. We trust, however, that the offence will be overlooked, on account of the insignificance of the offenders, and that the Naval Surgeons, who had nothing to do with it, will not be made to suffer, but be speedily

freed from the consequences of a restriction which we repeat, and we state it advisedly, was not directed against them; though, from being "warrant officers," they are unfortunately included in the order as it at present stands.

ROYAL INSTITUTION,

Friday, Feb. 18, 1831.

GEORGE MOORE, ESQ. F.A.S. VICE-PRES.
IN THE CHAIR.

Mr. Faraday on Oxamide.

DR. JOHNSON being prevented by indisposition from offering his observations on the natural history of the Planariæ, as announced, Mr. Faraday at a very short notice undertook to give some account, with experimental illustrations, of that newly-discovered and curious chemical substance which has been called, by M. Dumas, *Oxamide*, or *Oxalamide*, a name imposed for the present until its constitution be fully ascertained, and one which, although it does not indicate what the body truly is, tells what it can be made from, as well as what can be made from it, namely, oxalate of ammonia on the one hand, and oxalic acid with ammonia on the other.

Of oxamide there is a very interesting account published in the *Ann. de Chimie*, xliv. 113, an abstract from which paper may be found in the *Royal Institution Journal*, No. II.: from this, it would appear, that it is to be procured by the distillation of oxalate of ammonia. When heat is applied, the water of crystallization first becomes vapourized, and subsequently the whole of the salt volatilized, a little carbon only excepted, which is left behind. In the water condensed in the receiver, a white flocculent matter is seen, and a deposit of a whitish dull substance also lines the neck of the retort; both of which are oxamide, the body in question; and which, after diffusion through water, may be separated on a filter. 100 parts of oxalate of ammonia yield 4 or 5 of oxalamide, the other products being ammonia, carbonate of ammonia, carbonic acid, oxide of carbon, cyanogen, and water.

The curious features dwelt upon by Mr. Faraday, as belonging to this sub-

stance, are not, however, as he said, so much the fact, that although insoluble in water, and neither acid nor alkaline, it is resolvable by potash into two very soluble substances, the one highly acid, the other alkaline,—as, that it yields 36 per cent. of ammonia, when it contains none; and 82 per cent. of oxalic acid, though none is included in it: hence that, upon 100 parts, there is a clear gain of 18; 118 parts being the result of the decomposition of 100.

This increase, which caused at first some chemical perplexity, is, however, attributable, as Mr. Faraday clearly proved, to the decomposition of the water of the potassa, and the association of its elements. Of this, Mr. F. exhibited the following tabular illustrations:—

100 parts of <i>oxamide</i> yields	{ 36 ammonia.
	{ 82 oxalic acid.
	118

Now ammonia consists of 3 proportionals of hydrogen and 1 of nitrogen, oxalic acid of 2 of charcoal and 3 of oxygen combined with 4 of water, and when the oxamide is acted on by potassa, its constituents, which are

Atoms	Weight.	
2 Carbon ...	12	
2 Oxygen ...	16	
1 Nitrogen ...	14	
2 Hydrogen ..	2	
	<hr/>	
Plus	44	
1 Hydrogen }	} Water of the Potassa	
1 Oxygen }		
ne, after decomposition, thus re-		
red:—		
2 Carbon ...	12	
3 Oxygen ...	24	
	<hr/>	
	36	Oxalic Acid
1 Nitrogen ...	14	
3 Hydrogen ..	3	
	<hr/>	
	17	Ammonia.

These curious circumstances attending the formation and decomposition of oxamide, associated with those phenomena which occur when animal substances are made to yield ammonia, and also with those new observations of MM. Vanquelin and Gaydussac, who have found that almost any organic matter will develop oxalic acid when acted on by potassa, such as silk, wood, paper, skin, &c. would seem to be the

point of union of the chemistry of art with the chemistry of nature.

In the Library was exhibited a very handsome chain of *palladium* made for the Emperor Nicholas, of Russia; also some specimens of Russian platina coin, and a large piece of native Russian platina with crystals.

We also noticed a surveying quadrant, by Col. Bainbridge, "in which, by looking directly through the centre of the index-glass, all parallax is avoided, and an angle of 170 degrees may be easily taken at once." Likewise a very ingenious instrument, invented by Mr. Harris, which he calls an electro-thermometer, for investigating and measuring the force of electrical accumulation. Hitherto electricity has been measured only by its direct electrical or its magnetic powers; but by this instrument it may be more accurately measured by its heating effects. Mr. H. has thus already solved the long-disputed problem, as to whether hot or cold wires are the best electrical conductors: he finds that heating the wires diminishes their conductivity.

The announcement for Friday 25th, is "Mr. Cowper on recent Improvements in Paper-Making."

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE,
DELIVERED BY DR. ELLIOTSON,
February 8, 1831.

Cancer of the Uterus—Palsy of the Wrists from Lead—Prolapsus of the Vagina.

I HAVE to shew you this morning, gentlemen, a horrid specimen of *cancer of the womb*.

You observe here the uterus. This is the body of the womb, very little enlarged, but exceedingly hard—quite of scirrhus hardness. The neck is nearly consumed by ulceration; the os uteri is perfectly destroyed. The induration of the body of the uterus is greatest at that part which is nearest to the ulcerated portion, and as you ascend towards the fundus the induration is less, till at last the structure is comparatively healthy, but still more compact than it ought to be.

This is the urinary bladder, which has been cut into; the disease had not ulcerated into that organ, neither had it ulcerated into the rectum. Here is the bladder, and here

the rectum, which also, you perceive, is entire, with the exception of one minute point, where the coats, in fact, are excessively thin. There is now a small aperture, but this, possibly, was made after death, in withdrawing the parts from the pelvis.—You see that, on the other side, the ulceration has penetrated so as to thin the parts very much; but whether the aperture took place during life, or after death, I will not pretend to say. However, if the patient had lived a week longer, at any rate there would have been an aperture through into the rectum. The bladder appears thickened. The vagina is more or less implicated. The discharge was of the most fœtid character; it was hardly supportable to those standing near the patient when the bed-clothes were turned up.

This case follows the general law of those parts of a cavity which are nearest to an opening being the most liable to disease. The larynx is particularly liable to disease. The cardia, the pylorus, that end of the ilium where it terminates in the cœcum, and again the rectum, are far more liable to structural disease than any other parts of the alimentary canal. With respect to the uterus, you see here that the fundus is comparatively healthy, whereas the nearer you approach the neck, and still the nearer you approach the situation of the os uteri, the greater is the havoc.

This is the front of the uterus, here is the vagina; and you observe that external adhesions have taken place. The fallopian tubes are adherent to the uterus in about half of their length, and all the surrounding parts are more or less in a state of adhesion to that organ, exactly as is observed in phthisis; in which, wherever there is a collection of tubercular substance near the surface of the lungs, the corresponding spot of the surface is almost always found adherent to the costal pleura. Nature's view in this, as a general rule, is clearly to prevent mischief as much as possible. As ulceration goes on within, the adhesion without prevents the ulcerated cavity of the organ from forming a communication with the cavity of the serous membrane, be it the cavity of the peritoneum, of the pleura, or whatever else.

I will now cut into the fallopian tube on the left side, and you will see that it is labouring under the same scirrhus affection precisely as the womb itself. Here is the fallopian tube opened, and you observe a scirrhus deposit even here. It is all thickened together, in a state of great induration, and some enlargement. Here are two patches of circumscribed hardness, which are beginning to soften in their centre. This is a very good specimen of the course of scirrhus. Scirrhus, hard as it may be at first, after a time softens down. When softened, the

substance is sometimes called encephaloid ; it is said by some to soften down into an encephaloid mass, but that is inaccurate. There is no appearance of that brain-like matter which you see in the particular disease called encephaloid affection.

There is frequently in these cases a deposit of black matter, and a degree of melanosis ; and you observe accordingly that here is a collection of black matter, which appears to be pretty extensive—quite black. You sometimes find, in various parts of the body, scirrhus, encephaloid, and melanosis. The latter affection is generally supposed now to be an innocent disease—to do no harm, except so far as the bulk of the black deposit may produce mechanical inconvenience ; but it may take place, as well as others in themselves malignant, in conjunction with malignant diseases.

Here is a large encysted tumor filled with fluid, or a large collection of fluid by the side of the womb, giving the appearance of what was formerly called an hydatid ; though the term hydatid should be restricted to those formations which are vesicular animals, and should not be applied to mere encysted tumors. This one looks exactly like what is called a wind-egg—an egg without a shell ; merely membranous, without any calcareous deposit.

Here is another scirrhous tumor,—excessively indurated, like cartilage, all around, by the side of the womb. You see that, when divided, the more external part of the section is of a light-grey colour, while the more central is of a yellow colour ; and between the two you observe it is red,—of an excessively vascular appearance. This is a very beautiful appearance of the disease.

The tumor which I have just shewn you might, at first sight, be taken for an ovary, but I never saw an ovary when cut into, exactly of this appearance. Here is the ovary itself, which appears to be exterior to the fallopian tube, which I have cut open, and it is in a state of ulceration. You observe something like the granular and vesicular character which we see in ovaries. It is undoubtedly that organ, but adherent to the neighbouring parts. The fallopian tubes, the uterus, and the ovaria, have all grown together. It is very common in the ovary to find a black mass, such as you see here.

On the other side of the womb, corresponding to the part I have shewn you, you see another mass of scirrhus, white without, but within the whitened part it is red, excessively vascular, and there is also in some parts a dark colour ; it is in the progress of softening down towards the centre, but is still tough. At the moment of cutting into it, it was excessively offensive. This mass, I presume, is merely a very great deposit in the left side of the womb, projecting and forming a globe. There is a great part of the cavity

of the womb left, but there is a substance excessively large, just in one spot, in the form of a tubercle. You observe that the uterus is not much increased in size, but it is very irregular—that is to say, it has bosses here and there. According to the degree of change it has undergone—according to the degree of change and new deposit—it has become of irregular shape in various parts.

This specimen also illustrates the fact that when organic disease advances it is not confined to one structure ; for here is the mucous membrane in a state of rapid ulceration, here is the substance of the womb itself, and here is the peritoneum in a state of considerable hypertrophy—in a scirrhous state ; in fact, this which is external is the peritoneum fallen into a state of great hypertrophy, enlargement, and induration.

From the obstruction which takes place at the termination of the ureters in the bladder, you will very frequently find the pelvis of the kidney enlarged, and very frequently even the infundibula. You remark that one of these kidneys has a large cavity formed in it, solely by the accumulation of the urine. Here is the pelvis of the kidney not much enlarged, but here is one of the infundibula of very great size. It frequently happens that the termination of the ureters in the bladder at the lower part becomes diseased, becomes scirrhous, and the peritoneum and cellular membrane around are all indurated, so that the water does not readily enter the bladder. The consequence is an accumulation of urine all the way up the ureters, and in the pelvis and infundibula, so that the whole kidney is sometimes almost reduced to a bag. The other kidney has not yet been opened. You perceive that its pelvis is larger than that of the other, and the infundibula also are dilated. This kidney would soon have become a complete bag, instead of being a pretty solid organ, as it is naturally.

In scirrhus I believe there is in general both a transformation and a new formation. I believe that the structures are changed into other structures, and that also a new kind of substance is deposited in them. In this disease, parts which are naturally soft become cartilaginous, particularly the cellular membrane. There is a transformation into a sort of cartilaginous substance, but, besides that, a new substance appears to be deposited within the fibres of this cartilaginous mass. In general this disease is not very distinctly circumscribed ; you see here that the disease runs imperceptibly into all the surrounding parts. The cellular membrane around the uterus is more or less in an indurated state, and the surrounding parts are all grown together.

Scirrhus is generally at first of a light grey colour, and semi-transparent if cut into

thin slices. You may consider the exterior of this specimen as exemplifying what scirrhus is in colour at the beginning—a little greyish; and a thin slice of this, you see, is semi-transparent. Here is a slice of it rather transparent, but cut it thinner and it is much more so. You will observe in scirrhus two parts—a fibrous and a softer inorganic substance; but the former constitutes the chief portion. In this part of the womb, which has not become ulcerated, you observe this fibrous structure, and it really cuts like a turnip—has just the stringy fibrous appearance of a turnip. The part I now point out is in the first stage of the disease, when you see merely white filaments in the healthy structure; and here is another part that is becoming very scirrhus,—where the hard, white fibres are more numerous and bulky, and the fibrous substance, as I have just said, is the chief part; and here you observe a number of fibres running in various directions, forming septa, and these are opaque and whiter than the rest of the substance. The septa thus produced occasion it to cut like a turnip, and run in all directions, now and then producing cells. The proportion of the fibrous structure to that which is deposited within its septa is very various in different instances, and according to its distribution and proportion, you have the various appearances of these scirrhus tumors. Some are like the breast, and called *mammary*; some are like the pancreas, and are called *pancreatic*; and some are like tubercles—not scrofulous tubercles, but granules and tubera—and then they are called, though with some confusion of terms, *tubercular*. After a time, the less hard substance which is deposited within the septa, between the fibres, softens down into a pulp, so that you observe it sometimes like jelly and sometimes like syrup or gum; and this change is always observed first in the centre, which originally was the hardest part.

When these parts ulcerate, the disease is called *cancer*. Suppuration of the surrounding cellular membrane takes place, the edges of the ulcerated part are everted and elevated, and sometimes hard cauliflower excrescences spring from the centre of the ulceration; and as this extends very deep, great irritation of the constitution is produced, and an intolerably fetid discharge takes place. Sloughing occurs, and the neighbouring lymphatic glands are in general contaminated. These which I now shew you are the glands of the loins. You see that they are enlarged, they are almost scirrhus, and you notice that many parts are implicated. If the patient had lived, these glands would have gone through the same process as the uterus,—softened down, and ulcerated.

This particular disease generally affects

parts originally which are not necessary to life; and it also particularly affects parts whose functions have been interrupted, or never been performed, or parts that have been injured. It attacks the breast, the uterus, the ovaria, the testes, and the thyroid gland chiefly, none of which are parts necessary to the individual's own life, but the four first of which are possessed for the sake of another race which is to succeed. Life would go on just as well without them, though you will perhaps say not so merrily and happily. However, other parts which are for the individual himself, and some of which are important to life, become affected secondarily—viz. the lungs, the liver, the omentum, the mesentery, and the spleen, if that be important to life; the pancreas, if that also be necessary to life; the brain and its membranes; the medullary membrane of bones; and it will affect even the skin—that is to say, although the parts which are oftenest primarily affected are not necessary to life, or for the individual himself solely, yet the disease will spread to other parts; even to parts which are most important to the system. You are, perhaps, aware that it affects the bones—that persons who have cancer have sometimes their bones softened and rendered friable, and easily broken. Women who have had cancerous breasts have broken their legs in bed, and on inspecting the parts a diseased mass has been found in the medullary cavity and the cancelli; and, exactly as you have seen this morning, the surrounding parts all blended together, the muscles blended with the bone and cartilage; and sometimes there are spicula of bone in the morbid mass. You will find cases of this description mentioned in the 15th vol. of the *Medico-Chirurgical Transactions*, by Mr. Salter, a surgeon. There are specimens in the Museum which I would have shewn you, but it escaped my recollection that we possessed any.

This disease is generally attended with great pain—pain of a sharp stabbing character. It seldom occurs before the middle period of life, and it must be a very extraordinary thing to see it in a child. Now and then it is certainly seen in young persons, but as a *general* rule it does not take place before the middle of life, and then it will sometimes remain inert for many years. In other persons, however, it soon augments and softens, and irritation, ulceration, suppuration, and sloughing take place. Besides its remaining inert sometimes for many years, nature will sometimes effect a cure; the part will slough out, a complete slough will be formed and the diseased mass turned out, and the individual get well; but this likewise is a rare occurrence. When the irritation has become very great, the individual, in this as in other malignant dis-

eases, acquires a particular straw-coloured hue—a state of body which has been called the *cancerous cachexia*. It is not the paleness which you see in an excessive loss of blood, or in a case of enlarged spleen, but it is a particular straw-coloured look; it is not the look at all of ague, that is a sort of *dirty* straw-coloured appearance, but it is rather a sallow hue, a clean pale straw-colour; a complexion which is very characteristic, and which is always considered as indicative of a cancerous or malignant cachexia.

Now the patient from whom this specimen was taken, was admitted into the hospital about two months before her death. Her name was A. M. *æt.* 47. She said she had been ill two years, and had had excessive menorrhagia during the whole of this time till within the last four weeks, since which time green water only had come away; but till within the last four weeks she had had excessive and constant discharge of a bloody fluid. She also complained of strangury—a constant desire to make water, attended with very great pain at the neck of the bladder. She had also an excessive bearing down forwards: from the proximity of the neck of the bladder to the parts most affected, it would have been very extraordinary if she had not had these symptoms. She had also severe pain in the groins and thighs. The pain which she experienced was constant and severe in the hypogastric region, in the region of the womb, and likewise across the upper parts of the thighs. There is almost always an extension of the pain to the hips, so that they are in a constant state of agony, and this frequently extends down the thighs. There was not only constant sharp pain in the uterus, but also a throbbing and pricking in that organ. She said that in every respect her sufferings were like those of labour, only that she had little pain in her loins. I heard from her that at the time of her admission she had a discharge of clear water from the uterus, particularly in the morning, and that during the menorrhagia she had always felt pain in the left breast shooting down to the pelvis, shewing the sympathy between the two organs. I need not say, that having been ill two years, she was excessively weak, confined to her bed—she never got out of it here, at least I never saw her out of it. She had oedema of the legs, and, after death, oedema of the hands was observed.

On examining her per vaginam, as soon as she came in, I found the neck of the uterus excessively hard, as hard as any cartilage, and immovable. The whole uterus was fixed, and it was impossible to make the least impression upon the substance with the finger, or produce the least movement. There was one hard solid mass stuck in the pelvis. You see now that that must have been the case from the external adhesion of the organ to

all the surrounding parts; and on looking into the pelvis at the autopsy, the solidification had evidently extended from one side of the pelvis to the other, on each side of the uterus and the broad ligaments, so that there was one solid mass in the pelvis joined to the parts immediately adherent to the bones. General ulceration had begun, and on withdrawing the fingers, at the examination during life, I found them covered with blood. This is what is commonly found in the advanced stage of scirrhus of the womb. You find the os uteri ragged, the neck of the uterus excessively hard, and on withdrawing the fingers, they prove bloody. The examination gave great pain when the os uteri was touched.

This was a case perfectly incurable. She was at the period of life I have mentioned, forty-seven, having arrived at the age at which cancerous affections usually take place. She illustrated, too, another fact; namely, that the disease more frequently occurs in a part not only unnecessary to life, but which had performed its office in the economy. She had been ill two years, was aged forty-seven, and forty-five is about the time at which women in this country cease to menstruate, and ought, one would think, to give up employing their generative organs. However, she had plenty of children; and therefore she did not illustrate another fact, that parts indisposed to the performance of their function, are the most liable to the disease. Certainly, in general, this affection occurs in women who are either unmarried, or, if married, have had no children; but she, as I have just said, had had several; still, however, the uterus was now become an inert organ. I understand, but I do not know whether it had any thing to do with it (it would be well, however, if all women thought it had) that she had been a great gin drinker—never drunk, but always bibbing.

It was impossible to think of curing the disease, or even lessening it, and as to extirpation of the womb, there was such a solid mass fixed in the pelvis that it would have been quite impossible. If, however, the womb could have been extirpated, you see that some portion of the disease must have been left; for all the surrounding parts were in a state of scirrhus as well as the womb itself. The fallopian tubes, the ovaria, and the broad ligaments, were all scirrhous together. She was admitted on the 2d December, and, gradually sinking, died on the 31st January.

However, although no good could be done in the way of curing the disease, she was made exceedingly comfortable, and spent the time she passed in the hospital with the greatest degree of composure. I ordered her immediately two grains of opium every night, and it entirely lulled the pain, so that from having suffered excessively, having been sleepless generally every night, and

writhing in agony, she passed her nights with great comfort, and lay without complaining all the time she was here. Her answer to my inquiries was, that she was "very comfortable indeed." I allowed her a pint of porter daily and the house diet, and when the opium appeared to begin rather to lose its effect, at the end of three weeks, the dose was increased to three grains every night, and that was quite sufficient; she never took more. I understood that her bowels were regularly open. It certainly is a great satisfaction, when we cannot save life, to be able to mitigate suffering; and I do not know altogether whether it is not more desirable—a greater blessing on the whole, to make life comfortable while it lasts, and to remove suffering, than to save life. She was brought to a state of almost comparative freedom from pain; and one of the greatest delights in this world is freedom from pain after suffering severely. She sank gradually—did not die suddenly, but gradually, and with tranquillity. One of the great ends of our profession is to effect an *euthanasia*.

With respect to the powers and use of opium, I may mention that Sydenham, who used it abundantly, perhaps too much, and declared, with truth, that it has power not merely to relieve the suffering of many diseases, but to cure many—used to consider it as one of God's greatest blessings bestowed upon us, and to say, that without it medicine would be almost nothing—*ut sine illo manca sit ac claudicat medicina*, I think, are his expressions. I would remark, that common opium answers my purposes so well, that I very rarely think of giving acetate of morphine, black drop, and other peculiar preparations of it. I have used them all; and I will not deny that, now and then, a patient may be so peculiar as to have one of them agree with him better than common opium; but I am certain that this is not so very common a thing—that there is a great deal of fancy, and caprice, and habit, among those who employ such preparations; and some actually fall into such a habit as always to give one of them. I can only say that, in my practice, common opium almost always answers every purpose that I have seen answered by them; and it would be well if all our medicines were of as uniform strength as common opium and its tincture.

With respect to the factor of the discharge, she applied a solution of the chloride of lime to the vagina. This, I think, or some other chloride, is an article that should never be omitted when there is a discharge of an offensive nature from a patient. If it be applied assiduously and constantly, it takes away the smell entirely; and I direct it, in general, to be applied with rags, not only to the source of the discharge, and to the discharge itself, but to be sprinkled around the beds of patients, so as to destroy as much as possible the factor altogether. I do not

think the chlorides are yet by any means employed to the extent they deserve. If they were used in dissecting rooms, and where any contagion, or any effluvia, vegetable or animal, exists, I am satisfied that much disease would be prevented—innumerable cases of disease that arise solely from some emanation or another. The destruction of an offensive smell is comparatively a trifle, important as it is; and some think the smell of the chlorides so disagreeable, that they like it as little as an original stench; but we should remember that chlorine is innocuous, whereas the emanation that stinks is generally deleterious. You cannot do better than read the translation of Labarraque's work upon the chlorides by my friend Mr. Alcock, who has added facts to those of the work itself.

With respect to the opium, you might imagine that the frequency of its exhibition would have given rise to constipation; but although a small dose of opium will usually constipate, yet when a person takes opium for a length of time, and even in large quantities, you often find that it has no constipating power at all—I do not say always, but very often.

You are aware that the uterus is subject likewise to another disease, which is called, *malignant ulcer of the womb*. It occurs, I believe, more particularly, in the same circumstances as cancer of the womb. It begins as that disease does, in the neck, or, indeed, some say in the os uteri itself; but the uterus is not indurated around—there is merely a dreadful ulceration. Frequently patients complain of very little pain; and if you touch the part—if you press upon the part, you do not produce any great agony, sometimes hardly any pain at all. When you examine a woman with schirrus, you find extreme hardness, and she complains of extreme pain; but in malignant ulceration of the womb there is no induration, and if you make pressure the patient merely complains of a little smarting. There is, I believe, in it no new deposit. It was known to Dr. W. Hunter, and consequently you will find it well described by Dr. Baillie; yet it is singular that in the latter gentleman's work on Morbid Anatomy, though he speaks of schirrus, he never speaks of ulcerated schirrus of the womb—of open cancer of it, at least not in the edition that I have. All that he says is, that "ulceration is sometimes discovered upon its inner surface, but I believe it is generally wanting." The omission is hardly to be accounted for. The ninth fasciculus, plate 1, in Dr. Baillie's work, contains a view of a malignant ulcer of the womb, which was mentioned by Dr. Hunter in his lectures. Here is the neck of the uterus. The body of the womb is not affected, but sometimes it is slightly enlarged. Both these diseases, cancer and malignant ulcer, may extend to the rectum, and into the bladder. Sometimes the cavities are all

thrown into one, and then the suffering is horrid.

You are also to remember, that the uterus is subject to a hard deposit, sometimes large in quantity, without any danger whatever. Tubercles are produced in the organ; sometimes in the substance, sometimes under the peritoneum, sometimes under the inner coat, and then sometimes even hanging into the cavity; at least Dr. Baillie said that he once found a large mass of this texture within the uterus, scarcely attached. These are excessively hard, fibrous, and white; they consist of small collections of fibres heaped up into little balls, so that you may distinguish them from one another. Sometimes the uterus is so enlarged with them, that it may be felt above the pubes, which is not the case in true schirrus; and these do no harm whatever, excepting from their size and pressure. Fasciculus ix. plate 2, of Dr. Baillie's work, represents a uterus very much enlarged with them. Here, you observe, are tumors of this description—here are distinct tumors, the fibres running together in large portions; this is very common. I think some one says, who has made the subject a matter of inquiry, that in examining about one hundred females, from 45 to 50 years of age, twenty had deposits of this kind in the womb—fibrous tumors, but they remain inert during the rest of life, and never produce injury, excepting from their bulk, by the compression of the neighbouring parts.

These are called by Dr. C. Clark *fleshy tubercles*, but it is a wrong impression, if fleshy means muscular. Yet we must remember that our established word sarcoma is derived from *σαρξ*, flesh, and that an abdominal gland is called pancreas, from *κρεας*, flesh.

Besides this woman, gentlemen, no other patient has died since I had the pleasure of seeing you, but five have been presented.

One case was of *acute rheumatism*, which was rather obstinate, but yielded at last to perseverance in local bleeding and mercury.

Another of *continued fever*, which yielded to the usual treatment.

Another of *palsy of the wrists from lead*, which yielded exactly as the other case did which I spoke of in the early part of the session, as illustrating the great use of electricity*. We have here a great many patients labouring under palsy of the wrists on account of the white lead manufactories in the neighbourhood, and the great number of painters there are in the metropolis, but chiefly on account of the former. You know that the parts affected with this disease drop, and a person cannot extend his hand, fingers, or thumbs—they are entirely useless if it is severe.

I have tried a great many curative means, but certainly nothing has answered the pur-

pose so well with me internally as strychnine, and externally as electricity, but electricity has appeared to me much the better of the two. The other man was cured rapidly by electricity, and so likewise was this. The cure was much too speedy for me to ascribe it to the restorative powers of nature, to his removal from the poison, or indeed to any thing else but the electricity. The electricity was latterly given in sparks, but originally in shocks. The man used to assist when others were electrified, and the hand thus employed got a far greater share of the electricity than the other, and was recovering much faster. At that time both hands had shocks, but one continually had sparks from assisting when other persons were electrified, and that hand mended so much more rapidly than the other, that he requested no longer to have shocks, but sparks. I thought the good effects arose possibly from the greater dose of electricity which that hand had, but he thought that it arose from the sparks, and begged that he might have them in future. There was no objection to please him, and indulge his predilection for sparks, and I therefore allowed him sparks instead of shocks, and he continued to mend very well; he thought he did so more rapidly than before; however that might be, he went out nearly well. He did not wish to stay here any longer, being satisfied that he was recovered sufficiently to go to work, and get his living; he could extend his hands, fingers, and thumbs, and grasp firmly, so that he thought he was now perfectly able to get his living. I am glad to say that he will pursue some other occupation, and not return to the poison.

Dr. Pemberton, in his work on diseases of the abdominal viscera, speaking of colic and palsy of the wrists, which are frequently produced by the same causes, recommends that the hands should be extended in splints. For many years, on his recommendation, I caused persons to keep their hands thus in a state of extension, but I cannot say that I ever had reason to believe that the practice did any good. Friction, with some stimulating substance, and placing the hands in hot water, as hot as it can be borne, are very good, but no stimulant is equal to electricity or galvanism: we here employ common electricity. Electricity goes much deeper than any liniment: if you use a liniment, the stimulus is applied merely to the surface. All friction must more or less affect the parts within, and perhaps the external parts also; but far less than electricity. The electricity must be more powerful, as it will penetrate into and pervade the inmost parts. You may send it where you like. It was applied from the elbow downwards all over the muscles of the forearm and hand. There is another patient at present in the hospital with the same disease, who is likewise improving very much, exactly under the same treatment.

* Med. Gaz. No. 156, p. 283.

Prolapsus of the Vagina.

There was a woman presented with *prolapsus of the vagina*. She was said to have some horrid disease of the uterus or other; but on examining her, I found there was nothing more than a prolapsus of the upper part of the vagina: that part appeared so relaxed above, that on making the least effort the superior portion passed down, and formed a globular tumor, and forced its way downwards and forwards, and of course the uterus descended a little with it. The disease appeared to be an extreme relaxation of the upper and anterior part of the vagina. On giving her a pessary, she was enabled to go out.

Seven patients were admitted under my care the week before last: two women with syphilitic eruptions, and one with inflammatory dropsy; two men with rheumatism, one with hemiplegia, and one with neuralgia. Those admitted last week were ten: three females with hysteria, bronchitis, and gastritis; seven males with bronchitis, chronic dysentery, chronic peritonitis, neuralgia, palsy of the wrists from lead, and two with secondary syphilis.

LONDON HOSPITAL.

VARIOUS DISLOCATIONS.

CASE I.—Dislocation of the Femur upon the Dorsum of the Ilii.

A boy, ten years of age, in jumping across a ditch, dislocated his thigh upon the dorsum of the ilium. He was seen by a medical man, who, mistaking the case for disease in the joint, treated it with leeches and other local applications. The boy's mother, not being satisfied, brought him to the hospital September 27th, three weeks and four days after the accident, when the nature of the case being ascertained, some cathartic medicine was given him, and the following day slight but gradual extension was made by means of pulleys for a few minutes, when the bone was returned with facility into the acetabulum. The patient was kept perfectly quiet in bed; and in seven weeks from the time of the reduction he left the hospital completely recovered.

CASE II.—Dislocation of the Femur into the Ischiatic Notch.

Joseph Flower, aged thirty, met with an accident by slipping down in the streets early in the morning. He was immediately admitted into the London Hospital, under the care of Sir W. Blizard, and, upon examination, his right thigh appeared to be dislocated into the ischiatic notch. The limb was shortened about half an inch, and slightly turned inwards; the head of the bone could be felt but very indistinctly. After the patient had been bled to ℥xvj . by means of slight extension with the pulleys, and rotation of the knee outwards, the dislocation was readily reduced, six hours after

the accident. The case went on very well; the man soon refused to keep his bed, and was able to walk in a fortnight; and in three weeks after the accident he was discharged from the hospital quite well.

CASE III.—Dislocation of the Femur upon the Pubes.

James Welch, a muscular man, aged forty-four, was brought into the hospital with a dislocation of his left thigh upon the pubis. He said it was occasioned by accidentally slipping from the curbed stone. When admitted his left foot was everted and separated some distance from the opposite; there was very little shortening of the limb, and the head of the femur was distinctly felt in the groin. The bone was replaced by means of slight extension with the pulleys. The man was kept in bed, his hip leeched, and cold lotion applied to it; under which treatment he perfectly recovered in about a month.

CASE IV.—Complete Dislocation outwards of the Knee, and Compound Fracture of the opposite Leg—Recovery.

William Coward, a sawyer, aged forty, of temperate habits, but of a thin and spare form, was admitted into the London Hospital July 21st, under the care of Mr. Andrews, with a dislocation outwards of his right knee, and compound fracture of his left leg, produced by the falling of a piece of timber while employed at Mr. Matthew's mills at Tottenham. The dislocation of the tibia from the femur was complete, the articulating surfaces of each not being in the slightest degree in contact. The tibia and fibula were thrown to the outer side of the condyles, and formed there a remarkable tumor, a little above the level of the articulating surface. The condyles were equally prominent internally, with a hollow under them produced by the displacement of the tibia, and were covered merely by thin integuments, so that their form could be distinguished by the eye. The patella was thrown over the outer condyle. The direction of the axis of the tibia was altered, the foot being carried towards the opposite, and rotated a little inwards. There was no wound of the integuments, except a slight detachment of cuticle over the inner condyle. The reduction was accomplished by Mr. Luke without difficulty, by extension of the leg, and slight lateral pressure upon its outer surface. The limb was then placed upon a pillow, and supported on either side. The tibia of the left leg was thrust for two inches through the skin, and produced a wound three inches long. There was but little bleeding. The tibia was easily replaced by extension of the leg, the wound gently closed, and the limb placed in a foot-board with splints on each side. Thirty drops of laudanum were exhibited.

The patient had very little pain, and passed a tranquil night.

There was but little general excitement ; for some time the tendency to inflammation in the knee was effectually checked by the daily application of a considerable number of leeches. The compound fracture proceeded favourably at first ; subsequently severe inflammation took place in the leg, and extended up the outer part of the thigh ; several abscesses were produced, and when opened, the discharge of matter became so profuse as to reduce the patient considerably. It became necessary to support him for some time by a good diet, with plenty of wine and porter. Afterwards several pieces of bone were exfoliated at the seat of the fracture, which, however, was completely united, and the wound healed in four months after the accident. To his right knee had been applied friction, with liniments. The joint was weak, stiff, but without pain, and admitted of slight flexion. The skin on the inner part of the joint had become firmly adherent to the internal condyle, and contributed to impede freedom of motion ; he could, however, manage to move about easily on crutches, and was discharged from the hospital in the middle of November.

Since he has left the hospital the extent of motion and strength of his right leg has considerably increased.

CASE V.—*Dislocation of the Knee forwards.*

William Powell, a labourer in the East India Docks, was admitted into the hospital under Sir W. Blizard, with a complete dislocation of his left knee forwards, which was occasioned by a cask falling against his leg while he was at work. The deformity of the limb was considerable ; the leg was semi-flexed and shortened ; the patella was loose in front of the joint, and easily moved. The dislocation was reduced without difficulty, by slight extension and then flexion. Severe inflammation of the joint followed, which was subdued by the frequent application of leeches and cold lotion, with rest, under which treatment the man completely recovered the use of his knee, and was able to walk in about five weeks from the time of the accident.

CASE VI.—*Dislocation of the External Semilunar Cartilage of the right Knee—Unreduced.*

A. B. a young woman about twenty-two years of age, was brought to the hospital on account of an accident produced by slipping from a step while descending. When admitted she was enabled to stand on her left foot only, while she balanced herself on the toe of the right, which last she was unable to bring flat upon the ground. The knee was partially bent, and could not by any force applied to it be fully extended, nor could it be bent to so acute an angle as naturally.—The motions of the joint were much less free than usual, and without assistance could not be effected, except to a trifling extent. The

toe was turned a little outwards, and the tibia inclined in the same direction ; the inner part of its head bore its natural relation to the inner condyle of the femur ; the outer part, however, was carried a little backwards, leaving a hollow under the corresponding condyle, and forming a slight projection behind, not discoverable except by pressing on the part with the finger. The outer condyle, with its articular surface, was more prominent under the skin than usual, in consequence of the partial removal of the tibia from its front part. There was considerable pain when the joint was moved, and not any perceptible alteration in the tension of the ligaments. The symptoms were considered indicative of a dislocation of the external semilunar cartilage from the condyle, and the treatment pursued was in accordance with this opinion.

The following different methods of reduction were successively tried by Mr. Luke :—Extension of the leg while pressure was made against the back part of the tibia, and counter-pressure on the front of the condyles ; 2dly, the foot was drawn inwards towards the opposite leg, while the condyles were pulled outwards in the opposite direction, pressure being made at the same time against the outer and back part of the head of the tibia ; 3dly, a rolling pin, guarded with linen, was placed in the ham, and the knee forcibly bent over it. Neither of these plans succeeded, although repeated attempts were made. Some inflammation followed, but not considerable in extent, which required the application of leeches, Goulard lotion, &c. &c. to subdue it. She left the hospital in about a month, still unable to bring her heel to the ground, or to extend the knee beyond a certain point ; she could not well bear upon it, but in a little time she gained this power, and was enabled to walk with a high-heeled shoe.

CASE VII.—*Dislocation of the Cuneiform Bones.*

Patrick Power, a labourer in St. Catherine's Docks, was brought to the hospital October 4th, with an injury to the right foot, which happened whilst engaged at work there. Upon examination the three cuneiform bones appeared to be partially dislocated upwards. The internal cuneiform bone was chiefly displaced from the navicular bone, and projected upwards and inwards. No crepitus was perceived, and the ankle-joint was uninjured. By extension from the toes, and by pressure upon the displaced bones, they were returned after some time, with an evident sensation. A great deal of inflammation followed, which was subdued by leeches and cold lotion. The strength in his foot returned slowly, and he was not able to bear on it, or to walk, till six weeks after the accident.

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SATURDAY, MARCH 5, 1831.

LECTURES
ON
COMPARATIVE ANATOMY,
AS ILLUSTRATIVE OF
GENERAL AND HUMAN PHYSIOLOGY,
*Delivered in the Medical School of
Birmingham,*

By S. LANGSTON PARKER.

LECTURE X. (*concluding one.*)

On the Sense of Vision in different Animals.

GENTLEMEN,

THE eye does not present us with that regular increase in complexity of structure, by the addition of accessory parts in each class, designed to render the organ more perfect, which we observed in our last lecture with regard to the ear. We shall, however, find it to be composed of essential and accessory parts, which latter relate chiefly to its muscular or motive appendages, through whose agency the animal is enabled to extend his sphere of vision, by directing the eye to various points, without at the same time being obliged to move the body.

The mode we shall adopt in the consideration of this sense, will be cursorily to notice the peculiarities of the organ of vision in each class, and afterwards to consider the variations in the structure of its individual component parts, by which their physiology will be better understood. The lowest animals in which we shall study the apparatus of vision, are certain orders of the mollusca, as the sepia, the eye in them being the most rudimentary organ of the kind, constructed after the type of vertebrate animals; this part, in many insecta and vermes, presenting many inexplicable dispositions, from which we shall not be able to deduce any important physiological fact.

The eye in the mollusca, when it exists,
170.—VII.

(which it does not in all the orders) is composed of its essential enveloping membranes, a fibrous as the sclerotic, a vascular as the choroid, and a nervous as the retina, with its accessory dioptric parts or humours, of varied density, calculated to produce different degrees of refrangibility in the rays of light falling upon the transparent portion of the organ.

The membranes of the eye of the cuttle fish are three in number—an external, which is the sclerotic, presenting anteriorly a foramen, where the cornea is usually placed, which in this animal is wanting: this foramen may be termed the true pupil. Behind it exists a choroid, with an external vascular and an internal pigmentous layer; and anterior to the choroid a thick retina, in which the optic nerves have a filamentous expansion. A vitreous humour fills that part of the chamber posterior to the crystalline lens, which is here large and convex. The common integuments, in passing over the pupil, are rendered thin and transparent, and thus fulfil the functions of the cornea. Ciliary processes, and a ciliary ligament, are met with, to which are added two small muscles, which afford an almost imperceptible degree of motion. In the rudimentary eye of the mollusca, which we have illustrated generally by the sepia, the actions of the organ must be limited to an imperfect perception of objects situated immediately before it, since the eye possesses little mobility, and the skin representing the cornea is semi-opaque; the pupil being motionless, cannot, consequently, by its variations in size, regulate the quantity of light admitted to the organ. Such is the imperfect visionary sense of the mollusca.

In the class pisces the organ is evidently more elevated and perfect, possessing all the parts met with in vertebrate animals generally. The globe of the eye is here hemispherical, convex posteriorly, and nearly flat before; the sclerotic is united to a true transparent cornea, flat before, and concave pos-

teriorly. The external lamina of the choroid is generally of a pearly white, and surrounds all the inner parts of the eye, to the border of the pupil. The vascular lamina of the choroid, which is distinct from the external, is likewise continued to the inner margin of the iris. The ciliary body, or ligament, is so small that Blumenbach has denied its existence altogether; the iris is evidently formed by the continuation of the two laminae of the choroid: it possesses little motion. The retina is thick, and composed of two distinct laminae; an external, pulpy and soft, and an internal, of fibrous texture; the retina terminates on the circumference of the iris. The aqueous humour of the pisces is not perceptible: the crystalline, on the contrary, is nearly spherical, of great size, almost filling the whole of the globe; the vitreous humour is consequently small, enclosed in its hyaloid membrane. The chief peculiarity met with in the eye of the pisces appears to be the choroid gland, which is a ring situated around the entrance of the optic nerve, between the external pigment and the true choroid coat. This gland is composed of a tissue, or plexus of arteries and veins, whence De Blainville proposes to call it the "vascular choroid ganglion;" its colour is of a bright red. No fish appears to possess a tapetum excepting certain rays, and those of the shark genus, in whom the bottom of the eye is lucid and brilliant as silver. The accessory organs of motion are well developed in the eye of the pisces, the organ being surrounded by four straight, and two oblique muscles: they do not possess any lachrymal apparatus, and are deprived of eyelids.

The organs of vision in the reptilia present us with a much greater variety of disposition than those of the pisces, since, with the exception of anomalous instances, there appears little variation in the structure of the eye in the whole class, at least the differences are not sufficiently important to merit a distinct notice. The reptilia, on the contrary, from their general diversity of organization and habit, may be consequently supposed to offer some variation in the structure of their visionary organ in the four orders of chelonia, sauria, ophidia, and batracia. Most of the reptilia are provided with the third eyelid, or membrana nictitans, which is, however, most developed in birds.

The sauria possess the power of contraction and dilatation of the pupil to a great extent. The anterior part of the sclerotic is furnished with a circle of bony plates, as in birds, which surrounds the circumference of the cornea. The crystalline is generally very convex, more so in the aquatic than in the terrestrial orders of this class. The ophidia are generally considered to want a true lachrymal apparatus, though parts compensating for the deprivation of this struc-

ture have been described by Jules, Cloquet, and Sir E. Home. All the class are destitute of tapetum, the choroid being of a deep black colour. The globe is moved by four recti and two oblique muscles.

The habits of the class aves leading them generally to live in the air, and sometimes to seek their food at great distances from the earth, in a medium more rare than that inhabited by quadrupeds, it will be evident that they must possess an organ of vision more developed than the last class, in which should be found parts not met with in them, by which they may be enabled to see at variable distances, both in a perpendicular and horizontal direction. The eye of the aves predominates remarkably over all the other organs of the senses, and is very large in proportion to the brain and head. It likewise differs from most other animals in its form, the transverse diameter of the globe being much greater than the antero-posterior. The anterior border of the sclerotic contains in its substance the ring of bony plates we alluded to in the reptilia. The cornea is large, convex, and prominent, and frequently becomes remarkably so from being placed at the extremity of a tube formed by the projection of the osseous ring of the sclerotic, as in the owls. The choroid does not present any trace of pigment, and the ciliary processes are larger than in the reptilia. The retina is soft and pulpy, terminating at the posterior border of the ciliary body. The most remarkable organ in this class, to which it is peculiar, is the marsupium, or plicated membrane, which arises from the back part of the eye, on the internal side of the optic nerve, proceeding apparently through a slit in the retina. It passes forwards through the vitreous humour, or rather through a duplicature of its membrane, and terminates in some species in the vitreous humour itself; in others on the posterior and internal surface of the capsule of the lens. It is a thin laminous body, plicated or folded on its lateral surfaces; its internal organization consisting of a condensed cellular structure. Two functions are commonly assigned to this membrane; the first supposes it to be accessory to the action of the choroid, and to absorb a portion of the rays of light transmitted to the retina. The second (the most probable) makes it a muscular organ, designed to regulate the position of the lens, and thus to adapt the eye to vision at different distances. Its true properties are, however, as yet not ascertained. The crystalline lens is more compressed in the aves than in the mammalia, its posterior surface being most convex. The lachrymal passages open upon the palate, and the appendages of the eye are remarkable for a complete nictitating membrane, moved by an appropriate muscle. We shall now

mention the general characteristics which are met with in the eye of the mammalia, and afterwards pass to the individual disposition of parts, as illustrative of their physiology. The mammalia are distinguished for the spherical form of the globe of the organ of vision, for the softness of the sclerotic or fibrous envelope, for the great development of the ciliary processes, the number of motor muscles, which are never less than six, and may amount to ten; the layer of recti muscles sometimes being double, the internal layer, that immediately surrounding the optic nerve, occasionally consisting of four muscles; and in other instances, being a single muscular mass, bearing the name of the "choanoid," or retractor muscle. The disposition of the superior oblique muscle is likewise peculiar to the mammalia.

The "foramen centrale" of Soemmering, or the "tache centrale" of the French anatomists, is a small yellow point, situated in the axis of the eye, concave and transparent in the centre, around which the retina offers a plicated appearance. This organ is also peculiar to the higher orders of the mammalia, being exclusively confined to man and the quadrumana. The tapetum, or reflecting coloured part of the concavity of the choroid, is not confined to the mammalia, though in some of this class it is best marked. Man, the quadrumana, the lemurs and tardigrade animals, are deprived of it, together with the chiroptera and insectivora. In the carnivora the tapetum is beautifully displayed; in the dog, civet, jaguar, &c. it is of a dead white colour; in the otter, the lynx, and the panther, the white is shaded with blue; in the lion, the brown bear of Europe, &c. it is of a yellowish gold colour; in the domestic cat the tapetum is a clear blue grey, shining in the dark with the brilliancy of a diamond; in the ruminantia it is brilliant, its colours varying from blue to green, violet, &c.

Man is remarkable for the direction of the orbits, the internal walls being nearly a true parallel; consequently the extent of vision he enjoys is limited to the hemisphere before him. As we descend the scale, from the quadrumana to the carnivora, ruminantia, and rodentia, we find the eyes placed more and more laterally, so that the animal enjoys vision in each hemisphere, being deprived of it merely in the space corresponding to the separation between the orbits.

Several of the mammalia have a second lachrymal gland situated internally, near the nose, termed the "glandula harderi." The membrana nictitans, or third eyelid, rudimentary in man, acquires a greater development in the carnivora and the elephant; in the latter animal it has a muscular appendage. The whole organ of vision is much more developed in those animals which are truly carnivorous, whose prey is living and

fugitive. Other animals of this class have the eye remarkably developed, as the hare and rabbit, among the rodentia, where it actually serves as a means of defence, from its quick perception and the distant approach of danger. The crystalline lens and pupil are remarkably large in those animals which feed by night, to whose retina a greater quantity of luminous rays can consequently be admitted: such are the cat, the seals, the gerboa, the horse, &c. &c. If the habits of the animal lead him to dwell under ground, in complete obscurity, the eye is reduced to a small round point, situated under the skin: the organ is without distinct appearance of parts, and is supplied by a branch of the fifth pair of nerves, being destitute of a special nervous agent. This disposition, in all probability, enables the animal to distinguish light, but does not give him an idea of the form or colour of bodies; the rat, zemni, the proteus, and mole, &c. are examples of this structure. We shall now offer some remarks upon the individual peculiarities of the different parts of the eye in man and animals, and speak of their action: and first for the sclerotic, as our limits will not permit us to notice the appendages.

It is the sclerotic which determines the figure of the eye; hence its variation in density in different animals. According to Cuvier, it can only be soft and flexible in those animals where the eye is nearly globular, as man and the mammalia, since this form is produced by the nearly uniform pressure of the humours in the interior of the globe. In other animals, where the form of the eye is not globular, as in the cetacea, the pisces, and aves, this membrane presents a greater degree of inflexibility, and is supported by the addition of osseous plates, as in the reptilia and aves, which will not allow of any variation in form. The cartilaginous structure of the sclerotic in fish is likewise adapted to the same end. It has been supposed that the tenuity of the anterior portion of this membrane, where the muscles are inserted, allowed of an alteration in the antero-posterior diameter of the eye, from the action of the recti muscles, which enabled the animal better to distinguish objects immediately in his vicinity, the pressure of the muscles pushing forward the humours, and thus rendering the cornea more convex; a relaxation of the muscles would, on the contrary, provide for vision at a distance. However this may be in the quadrupeds or man, it is impossible to admit the theory with regard to the pisces, aves, or reptilia, since, with a few exceptions, the sclerotic of these animals is incompressible. There are certain individuals, notwithstanding, in which the sclerotic is manifestly adapted to variation in the size and diameters of the globe of the eye; such are certain cetacea and the seals.

In the Greenland seal (*phoca groënlandica*) the anterior and posterior parts of the sclerotic are thick and firm, the posterior almost cartilaginous; the central, or that part intervening between the other two, being remarkably thin and flexible. In this case, the action of the strong muscles surrounding the ball produces the requisite changes, the antero-posterior diameter of the eye being lessened when the animal sees in air, and lengthened when vision is exercised in water. In the seals, which are all truly amphibious animals, the structure is similar, and the organ consequently fitted for vision in different media. The cornea completes the external envelopes of the eye anteriorly, and contributes materially to its general form. In the three classes of mammalia, aves, and reptilia, it presents distinct varieties in its form, corresponding with the different medium of habitation in each class. In the mammalia the globe of the eye is nearly spherical, from the slight projection of the cornea. It forms, however, in this class a segment of a smaller circle than the sclerotic, and consequently is more convex than that membrane. This variation will be hardly perceptible when we consider the ratio between the antero-posterior and transverse diameters of the eye, these in man being as 137 (the antero-posterior) to 136 (the transverse); in the dog as 24 (the antero-posterior) to 25 (the transverse). In the pisces and cetacea the cornea is flat, or nearly so, the whole globe resembling a hemisphere, the convex portion of which is backward. In the aves the eye deviates again from the spherical form of the mammalia in the great convexity of the cornea, which is more remarkable in the accipitres, or high-flying birds, than in the struthious class, which we shall see depends upon the different densities of the media in which these animals seek their food, to which purpose vision is here principally subservient.

In the ostrich the cornea is flat; in the diurnal birds of prey it is remarkably large and convex; these dispositions being carried to their maximum in the nocturnal species—as the owls. In the nocturnal carnivora (those feeding by night) the cornea is generally more convex than in the remaining orders. The cornea depends, for its convexity, upon the proportion of aqueous humour lying behind it: thus in the class pisces, in which the aqueous humour is absent, the cornea is flat; since the rays of light passing through an element of the same nature as the humour, the latter would exercise upon them no refractive power. In the mammalia and man the proportion of aqueous humour is increased, the cornea rendered more convex, and its refractive power consequently greater. In the aves the aqueous humour is most abundant, the

cornea hemispherical in many species, and its refractive power necessarily very great.

The cornea will possess a refractive power in direct ratio with its convexity. The aqueous humour will possess this property in greater perfection, as the medium from which the luminous rays are transmitted is more rare. Thus the actions of the cornea and aqueous humour are found to be most exalted in the high flying birds, where the atmosphere is rarest and the cornea most convex. The immediate functions of the cornea are, then, to give passage to the luminous rays by its transparency, and by its variable convexity to exercise upon them a certain degree of refraction.

The crystalline lens, which falls next under consideration, is always in an inverse ratio in reference to the cornea. If the lens be spherical, the cornea is flat; if the latter be convex, the surface of the former is plain. This is perfectly exemplified in the two extreme classes relating to their structure, viz. the pisces and aves. In the fish the lens is round and the cornea flat; in the bird the cornea is hemispherical and the lens flat. The crystalline lens of the fish is, as we have observed, nearly spherical in most orders, and perfectly so in others, its anterior portion projecting through the pupil into the anterior chamber of the eye, and thus obliterating the space allotted to the aqueous humour, which is hardly perceptible in this class, from circumstances we have before mentioned. In the mammalia and man the crystalline is composed of two segments of a sphere; the posterior segment generally being most convex, the anterior surface is much flatter in man than any other mammiferous animal. In the class aves the anterior segment of the crystalline is rendered nearly flat, from the convexity of the cornea and the great proportion of aqueous humour. The crystalline is that body in which the greatest degree of refractive power exists, generally speaking, and its convexity and density are in strict accordance with the medium the animal inhabits;—thus, in the pisces, nearly all the refraction of the rays takes place in the lens, from its increased density, it being harder in this than in any other class, as the medium from which the luminous rays pass is denser. The vitreous humour always depends, for its quantity, upon the size of the crystalline lens; and from this disposition its importance and actions may be ascertained. In the herring the vitreous humour occupies a seventh part of the globe of the eye, and the crystalline five-sevenths. In the owl it does not occupy quite a third, whilst the crystalline takes up a little more than a third. In man (who has the smallest crystalline and the largest vitreous humour) the latter fills more than two-thirds of the whole globe.

From the varied volume and density of

these three humours in animals, we may deduce an important fact relative to the importance of the lens to vision in man. In the pisces it takes up nearly the whole of the globe, and, as nearly all the power of refraction in this class takes place in this organ, abstraction of it would render the animal blind. In man, on the contrary, it occupies but a small portion of the ball, and its edges are not more dense than the vitreous humour itself; thus nearly an equal power of refraction is effected in the vitreous humour, and vision is merely rendered imperfect, from obstruction of the lens. In no other animal can this organ be abstracted with so little injury to vision as in man; the immediate effect of this operation being, not to destroy the image portrayed upon the retina, but to enlarge it fourfold, and render its outline dusky and indistinct. Thus we conclude that the action of the crystalline in man is to render the image on the retina distinct and clear, its presence not being essential to vision but accessory to its perfection.

Petit has observed that the choroid of the human subject gradually becomes lighter as the individual advances in age; so that at 30 years the internal surface of this membrane is nearly white. We have likewise seen the tapetum to exist in many animals, as the ruminantia and carnivora. The effect of the dark-coloured or black pigment of the choroid, is to absorb the luminous rays which have passed the retina, and whose reflection might cause some confusion in the function of vision. The choroid is black in most animals strictly diurnal, who range and feed during the day only. It varies infinitely in colour and brilliancy, to a greater or less extent, in those animals who take their prey during the night. The black pigment absorbs the rays which pass the retina, after having pictured the image of the seen object upon it*. Were these rays reflected by a tapetum, or were the colour of the pigment any other than black, the reflection of a considerable quantity of the luminous rays would render the image of the object upon the retina too vivid, and a confusion, or imperfection, would be produced in the exercise of vision. Such is the general view of the subject, and it is illustrated and confirmed by the observation of the Albinos, who are deprived of pigment, and in whom the choroid is of a bright arterial red. These beings are consequently incap-

citated from seeing clearly any object in a moderately strong light; the reflection of the luminous rays which have passed the retina by the red and brilliant choroid, being more exalted than the sensibility of the retina is enabled to bear. When the rays of light admitted to the retina are but few, as in the evening, or during the night, the coloured pigments, far from being injurious to vision, are highly beneficial to it: as the luminous rays are reflected upon the image, its points of contact with the retina are consequently multiplied, and the impression rendered more vivid. The action of the tapetum appears to be confined principally to the night, when its reflecting powers are of the highest service in rendering all the rays which have passed the retina useful to vision, by reflecting them. It will be remarked that those animals who possess the most brilliant tapetum, as the felis or cat genus, have the most extensive motion of the iris, so that, during the day, they can regulate the quantity of light admitted with the greatest precision, and thus prevent any confusion or imperfection of vision from too powerful action of the tapetum. The action of the coloured pigments is limited, then, to the exercise of a reflective power, which is highly serviceable to vision in a feeble light. By this action the image of the object has a two-fold impression upon the retina—one on its anterior, the other on its posterior surface; whilst, when the black pigment alone exists, the impression is singly confined to the concave surface of the retina. This mode of action explains the use of the change in the colour of the choroid in the human subject, from black to white, in the young and aged; the whitish pigment acting as a reflector, and multiplying the contacts of the image with the retina, when its sensibility is impaired from age, and its vital and perceptive properties are feeble and have lost their energy. That this is the true and legitimate action of the coloured pigments of the choroid, will be further seen by consideration of the peculiarities in the disposition of the retina of certain animals.

In certain pisces, and in some birds, as the eagle, vulture, and falcon tribes, the retina, instead of being a smooth membrane, is folded upon itself, after the manner of a half-closed fan, the border of one fold overlaying part of the one beneath it. These folds are most remarkable, and most numerous, in the high-flying birds of prey; and from this disposition we shall be enabled to account for the perfection of the sense of vision in these orders. I need not here enter into any disquisition upon the force and power of the ocular sense in certain birds of prey; taking it for granted this is generally admitted and understood, I shall only speak of the manner in which the exercise of this property is produced.

* According to the late Mr. Hunter, the luminous rays only, which strike on the surface of the retina, are essential to vision, those passing through being productive of no sensation till reflected on the posterior surface of the retina, from a coloured tapetum. For much instructive information on this subject, and the colour of the pigmentum of the eye in various animals, see his *Observations on the Animal Economy*. London. 4to. 1786.

It has been generally admitted by physiologists, and, in fact, it is a point I have insisted upon in previous lectures, that the action of the nervous agents of the senses are purely vital, and exercised in a way which neither chemistry nor physics can explain. The disposition of the retina, however, in these animals remarkable for the most perfect organ of vision, seems to favour the hypothesis of the mechanical functions of this part, which opinion is likewise supported by the actions we have seen displayed by the tapetum, and various coloured pigments of the choroid. The folds of the retina give rise to a phenomenon purely mechanical, *i. e.* a multiplication of the points of contact of the luminous rays with the retina, the number of points of contact, or images depending upon the number of folds*. We have seen that the retina is a transparent membrane, allowing the luminous rays to pass through it, the image of the visible object being pictured by the luminous rays on the surface of the membranes, which rays subsequently traverse the substance of the retina, and are ultimately absorbed by the black pigments of the choroid, when they exist, and reflected when a tapetum is present. The existence of a tapetum, or reflector, behind the retina, supposes both its surfaces, the anterior and posterior, to be equally sensible. When, therefore, a tapetum exists, the image upon the retina is doubled, from its reflective action. If we suppose any object to be rendered more conspicuous, or visible, from the number of its images impressed upon the retina, we can instantly account for the power of vision in the bird of prey; in most of these orders the retina being, as we have said, folded upon itself, in two, three, or four folds, or plaits, placed upon each other.

From this mechanism we have four, six, or eight images of the object seen, pictured by the luminous rays in their passage, on the anterior surface of each fold. In birds there is no tapetum, or the number of images would be doubled. It appears from the dissections of Serres, that the long agitated question, "Do the optic nerves decussate, or do they merely approximate without crossing?" may be set at rest, and answered in the affirmative. The structure of the nerves is so amalgamated in man and the higher quadrupeds, that they form very unfit subjects for the examination of this disposition; but as we descend from the latter animals to the birds, reptilia, and pisces, the decussation becomes more and more apparent; in fact, so much so, that, in many instances, the nerve of the right side proceeds to the left, and *vice versa*, the nerves at their point and junction being merely in apposition,

without any intermixture of fibre, as in the oppidia*.

The lenticular ganglion, which furnishes the nerves of the iris, is, in man, composed of communications from the 3d and 5th pairs of cranial nerves; but in many animals remarkable for the mobility of the iris, the 3d pair only is in communication with this ganglion, the 5th sending no branches to the iris. The iris itself is not sensible to the impression of mechanical stimuli, its nerves being solely motor. Light produces no contraction, neither does the irritation of a foreign body, as a cataract needle. The iris is dependent for its mobility upon the impressions received by the retina, contraction of the former membrane being subsequent to the impression of light upon the retina. The 6th pair of nerves cannot give mobility to the iris, since in many instances, as in the "*falco* genus," it does not penetrate into the eye, or furnish any of the ciliary nerves, which in these individuals are branches of the 3d pair alone, and of great magnitude. A direct and powerful sympathy is established and kept up between the iris and retina, whereby the former is enabled to regulate the proportion of stimulus transmitted to the latter; and from the non-existence of the branches of the 5th pair, as ciliary nerves in many animals, instances of which we have deduced, and from the important offices of which we have seen the 5th pair to be the seat, in reference to the actions of the senses, I am led to believe these sympathies are kept up through the exercise and influence of this nerve. If the optic nerve be divided, the pupil dilates and remains fixed and motionless; here we see the primitive cause of contraction of the iris resides in the retina. If the 5th pair be divided the same effect takes place, but from a different cause, *viz.* a want of consent between the two organs. If the 3d pair be divided, still the same effect is produced, and still from a different cause, *viz.* the loss of the motor nerve of the part, or of that influence immediately exciting its movements.

We have seen that the anterior portion of the cerebral hemispheres was in connexion with the sense of smell by means of the olfactory lobes and their appendages. The ocular sense we find communicating with another portion of the central nervous mass, through whose medium the mind is made sensible of the impressions received by the senses.

In all animals the tubercula quadrigemina, or optic lobes, are in direct relation with the optic nerves and organs of vision. In the

* For fuller information, and the opinion of the anatomists who have disputed this point, I refer the reader to the elaborate treatise of Serres, t. ii. p. 310, et suiv.

* Desmoulins et Magendie, op. cit. t. ii. p. 667.

birds of prey the optic lobes are four times more voluminous than in the orders possessed merely of ordinary vision; and the cavity which exists in these organs in birds becomes a large ventricle. The like is observed in the predominance of these parts in the fish of prey over the same parts in the other orders. In the class pisces generally, the optic lobes are the preponderating parts of the brain, this structure enabling the animal to increase his intensity of vision through a fluid much denser than the atmosphere, and consequently requiring a greater nervous power for the exercise of vision than that possessed by the mammalia, or birds. These facts throw much light upon the origin of the optic nerves, and the effects likely to be produced by inflammation, or the deposition of morbid tissues in the substance or vicinity of the optic lobes, or tubercula quadrigemina.

I have now finished the few remarks I had to offer you upon the anatomy and physiology of certain parts of the nervous system and senses, and you will perceive that the ground which I have taken has been entirely new, viz. that of directly applying the study of the structure of animals to the elucidation of the actions of parts of the economy of man. On the importance and utility of this study it is needless for me to enlarge; I trust I pointed it out to you in my first lecture, wherein I illustrated, from comparative anatomy, the functions of the ganglionic system of nerves, and their influence upon the vegetative sphere of life, or the organs of the involuntary functions. In my second lecture I illustrated the formation of the human brain, from the origin and development of the same part in animals. In my third I shewed you the formation of the spinal cord and nerves in the same way, and deduced some important physiological facts with regard to the actions of the animal nerves generally, and the pathological state of the spinal cord, as connected with spina bifida. In my fourth lecture I considered the 4th, 6th, and 5th pairs of nerves, and deduced from comparative anatomy the functions of the 5th, as the sympathetic nerve of the senses. In my fifth lecture I considered the 7th and 8th pairs, and showed from comparative anatomy the respiratory actions to which each was separately the agent; the 7th being a mechanically respiratory nerve, from its action upon the muscles of the face; and the 8th being a chemical one, from its presiding over the great changes undergone by the blood in the pulmonary circulation. In the remaining lectures we pursued our remarks upon the senses, and illustrated the actions of their various parts by facts drawn from comparative anatomy. I would here

remark, that very many of the facts laid before you during this course of lectures, have been the result of my own dissections, particularly those on the formation of the brain. The remainder have been collected from various authors, chiefly continental; and have been nearly all verified by myself. During the whole course I have confined myself to those points necessary for the elucidation of physiological action. It has not been a series of lectures on comparative anatomy generally, but on the subject so far as it should be known by every well-informed medical man. I have before advanced that both Haller and Hunter owed their eminence to its study;—it was the foundation of the *Elementa Physiologiae**, and forms the substance of the vast body of physiological facts illustrated by the preparations in the Hunterian Museum.

"There is no path to scientific improvement," says Mr. Abernethy†, "but that which Mr. Hunter trod;—it is the path of physiology. It is now fairly laid open to you: enter—and in proportion as you pursue it with vigour and constancy, so will you arrive at knowledge and obtain renown‡."

Abstract of a Clinical Lecture, lately delivered*

BY DR. GRAVES,

AT

SIR PATRICK DUN'S HOSPITAL,
DUBLIN.

The Effects of Posture in Catarrhal Affections difficult to be accounted for—An opinion of Laennec's controverted: Bronchitis not so constant an attendant on Continued Fever—Treatment in Fever accompanied by Bronchitis—Another opinion of Laennec's controverted: the Stethoscope does not afford a sure rule for the employment of Venesection—Case of Pulsation of the Jugulars, accompanied by hypertrophy and dilatation of both the right and left sides of the Heart.

GENTLEMEN,—Having lately witnessed a great variety of pulmonary diseases in the clinical wards of this hospital, their symptoms and treatment naturally

* *Elementa Physiologiae Corporis Humani*; auctore A. Von Haller. Lausanne, 1757, 1766. 9 tom. 4to.

† *Physiological Lectures*.

‡ An erratum will be found at the end of the volume, page 832, in which some typographical errors, which have occurred in these lectures, are corrected.

engaged our attention in a more than ordinary degree, and we have consequently been enabled to arrive at conclusions which tend to correct some prevalent errors upon these important subjects. In the first place, the present epidemic cough, depending chiefly on the irritation arising from catarrhal inflammation, evidently affecting the trachea and its larger subdivisions only, scarcely extending to the bronchial tubes of small calibre, and quite uncomplicated with pneumonia, has afforded us an opportunity of observing that certain positions of the body are capable of aggravating the cough depending on this disease in a very remarkable manner—a fact we cannot explain on the physical principles usually resorted to in accounting for a similar phenomenon in pneumonia, empyema, &c. In the latter diseases, the dyspnœa and cough are frequently greatly increased in certain positions, in consequence, as it is thought, of the healthy portion of the lungs being in these positions pressed on and impeded in the discharge of their function, either by the superincumbent diseased, portions of the pulmonary tissue rendered more solid and weighty in consequence of inflammation, or by the weight of the effused fluid, &c. &c. It is true, that even the diseases just mentioned not unfrequently furnish us with cases which cannot be thus explained, for we have more than once seen that a patient, labouring under pneumonic hepatization of a large portion of one lung, has experienced most freedom from cough and dyspnœa when lying on the opposite side. Although this circumstance has been noticed by several authors, yet these exceptions to the general rule were not considered as invalidating the correctness of the explanation.

Many of our patients having complained, that although they coughed comparatively little during the day, while sitting up in the ward, yet on lying down in the evening they were attacked with violent and long-continued paroxysms of coughing, I became alarmed, and examined their chests repeatedly, fearing that their complaint might be complicated with some more serious pulmonary disease; I found, however, these fears unfounded, for no other affection could be detected than the catarrhal inflammation already mentioned: as these persons lay in the room where

they had spent the day, and as the same paroxysms came on, no matter at what hour they went to bed, it is clear that they cannot be attributed either to a change of temperature, or to a febrile exacerbation depending on the time of day. I most carefully inquired into these circumstances, and made several experiments, from which it followed, that the exacerbation of the cough was almost solely induced by the horizontal position. Since the pulmonary tissue and the pleural cavities were here perfectly free from disease, the physical explanation above spoken of is totally inapplicable, and I am, therefore, almost inclined to join those who suspect that there are very few cases in which this explanation ought to be admitted; I must at the same time confess my inability to substitute a more tenable hypothesis.

The next topic worthy of your notice, gentlemen, relates to the bronchitic affection, said, by Laennec and his followers, to be so constant an attendant on continued fever. “At the commencement, and most commonly throughout the whole course of the fever, the catarrh,” says Laennec, “is latent, without cough or expectoration, and only to be detected by the stethoscope.” The fact here announced by the justly-celebrated inventor of the stethoscope, if true, would evidently be of vast importance, and would suggest important modifications in the treatment of continued fever. I must confess, however, that after a long and attentive observation of many hundred such cases, I have arrived at a different conclusion. It is true, that in the great majority of fevers accompanied by dryness of the skin and tongue, rales are more or less audible in the chest, similar to those heard in slight inflammation of the bronchial mucous membrane, and which must consequently be caused by a physical state of that membrane closely allied to that produced by slight bronchitis, namely, a diminution and alteration of the natural secretion. When we recollect that the cutaneous perspiration is suppressed during the course of such fevers, and that the tongue and fauces are evidently not less deranged in their secretions than the skin, it is more than probable that a similar derangement, from the agency of the same general

cause, is at the same time produced in the mucous membrane lining the bronchial tubes, sufficient, it is true, to produce the rales already spoken of, but in its nature as much differing from true bronchitis, as the state which occasions dryness of the skin and tongue differs from inflammation of these parts. This view of the subject is confirmed by an observation of Laennec, which I have often verified, that when a crisis takes place, at the very time when the lateritious sediment shews itself in the urine, every sign (even stethoscopic) of perhaps very intense and extended catarrh, disappears at once. Now, gentlemen, inflammations do not, even in fever, disappear thus suddenly, and I have repeatedly observed that when true bronchial inflammation runs its course along with fever, it most usually remains after the crisis, and may even then prove troublesome. If, on the other hand, we adopt the supposition that Laennec's stethoscopic signs of catarrh are owing to the state of the bronchial mucous membrane, which I have described, we can experience no difficulty in accounting for their disappearance at the period of the crisis when the cutaneous and all other secretions are so suddenly restored to their healthy standard. This conclusion is much confirmed by the fact noticed by Laennec himself, that "the inflammatory fever of nosologists—that is, the fever characterized by a *flushed countenance, moist and clean tongue, and a moist and moderately hot skin*, is of all fevers that in which the marks of dry catarrh are the least perceptible, or are even entirely absent. Another fact, equally confirmatory of my hypothesis, I have very frequently pointed out to the students when ague was prevalent in Dublin. During the paroxysms of the intermittent, the stethoscopic signs of dry and latent catarrh were frequently observable, and as frequently were totally wanting during the intermissions. All these considerations leave little doubt on my mind that Laennec was wrong in considering bronchitis as an almost constant attendant upon continued fever, a view which has misled many, and has even occasionally been productive of mischief, by making the practitioner consider as a result of local inflammation that which is a consequence of the general febrile state. Under such circumstances, I have seen blisters applied to the chest,

and tartar emetic, and other expectorants, exhibited without advantage, if not with detriment to the patient.

But, gentlemen, I would not have you misunderstand me, or believe me to be of opinion that real bronchitis does not occur in continued fever, for bronchitis is a frequent concomitant of that disease, and as such claims the most attentive care on the part of the physician. In fevers so complicated, the pectoral affection, though it may not be apparently very severe, is *very rarely indeed latent*; and in this it evidently differs from Laennec's catarrh before spoken of. It may be present with very different degrees of severity, but almost invariably is attended with more or less dyspnoea and cough, besides the usual stethoscopic signs of bronchitis. In such cases, as the fever advances and the patient's debility daily augments, all the symptoms are often greatly aggravated by the diseased state of the bronchial mucous membrane, which becomes particularly distressing if the period of increased secretion into the air-tubes coincides with a state of much general weakness; for the patient being then scarcely able to cough up the viscid mucus, it accumulates in the lungs and becomes the source of new danger, preventing the due aeration of the blood, and thus increasing the stupor and other bad symptoms. In persons who have died in consequence of this combination of bronchitis and fever, we have constantly found a considerable portion of the lungs engorged, and the bronchial tubes filled to a great extent with mucus. The engorgement corresponded in situation to the position in which the patient used to lie; and as such persons usually remain on the back, it was generally on the posterior part of the lungs. This state of pulmonary engorgement, induced partly by the bronchitis and partly by the patient's position in bed, has almost invariably proved fatal in fever, and may be known by a constant moist crepitus in the portion of lung thus affected, accompanied by a great increase of the dyspnoea. It is of great importance, therefore, to avoid the supervention of this engorgement, not only by the means usually recommended for clearing the lungs of mucus, but also by a constant attention to the patient's position in bed, which should be changed every two hours:

he should be placed in succession on his right and left sides and back, and should, in the former positions, be carefully propped up by pillows. When his strength permits, he may even be supported, at intervals, in a posture somewhat approaching to sitting; his head and shoulders being considerably elevated. I can assure you that attention to this simple circumstance has been often mainly instrumental in saving life, by preventing the occurrence of pulmonary engorgement; and I have recourse to it, not only in fevers accompanied by bronchitis, but in all long-continued fevers, which are necessarily attended by great weakness; for in both, the most pendent portion of the lungs is apt to become engorged. I need not remind you that this state of lungs has been most inappropriately called, by Laennec, *pneumonia morientium*: I say inappropriately, because, in pneumonia, the increased quantity of blood found in the inflamed part of the pulmonary tissue is owing to an afflux of this fluid, derived from vascular action; whereas the engorgement we have spoken of is evidently the result of a debility in the vital forces, allowing the influence of gravity to operate on the distribution of blood.

Another object, gentlemen, to which I beg leave to direct your attention, is one of considerable practical importance. It has been long acknowledged that the pulse cannot always be considered as a sure guide in the employment of venesection; an operation which is often necessary even when the state of the pulse seems to contraindicate its employment. "In cases of this sort," says Laennec, "the stethoscope affords a rule much surer than the pulse: whenever the contraction of the ventricles is energetic, we may bleed without fear; the pulse will rise. But if the contractions of the heart are feeble, although the pulse still retains a certain degree of strength, we must be cautious respecting the employment of venesection."

The latter proposition may, for aught I know, be correct; but I must decidedly deny the truth of the assertion, that, whenever the contraction of the ventricles is energetic, we may bleed without fear; an assertion so much at variance with the results of my expe-

rience, that I rather think it must have been the offspring, not of observation, but of theory. In the first place, in persons who have hypertrophy and dilatation of the heart, the ventricular contractions will be energetic often until a short period of their death, and under circumstances in which venesection would be totally inadmissible. Of this I have lately witnessed two examples, and one of them made a deep impression upon my mind, as, misled by the precept of Laennec, I was induced to bleed the patient, attending only to the violence of the heart's pulsations, and not to the general symptoms. In this case, the man died in the course of a few hours after the venesection. Dissection, indeed, revealed lesions which proved that death was inevitable under any mode of treatment; but still that event was no doubt accelerated by the bleeding. Nor do diseases of the heart form the only exceptions to Laennec's rule; for I can assert, in the most positive manner, that I have seen cases of pneumonia in which the heart's pulsations continued violent until within a short time of dissolution: so much so, indeed, as to induce the erroneous belief in myself and other medical attendants, that this organ was in a state of hypertrophy and dilatation; and yet it was found, after death, to be in every respect healthy. In these cases, the extent of pulmonary hepatization which was detected on dissection, together with the shortness of the interval which elapsed between the time when we observed the heart's pulsations to have been so violent and the fatal termination of the disease, made us rejoice that no further use of the lancet had been made; as the patients' friends would have most probably attributed death to the untimely loss of blood. I am the more anxious, gentlemen, to impress upon you these facts, because the language in which Laennec expresses himself upon this subject is so strong. His concluding observation is as follows: "The certainty and facility with which the cylinder indicates the propriety of blood-letting in such cases as those above-mentioned (which have been hitherto considered the most difficult in practical medicine), appears to me to be one of the greatest advantages to be derived from the employment of this instrument. It is certainly of the most general application, as it refers to the

employment of one of our therapeutic measures, which is the most ingenious or the most useful of any, and which may be had recourse to in almost all diseases."

It is with regret I find myself obliged to differ, on this practical point, from one to whom our science perhaps owes more than to any other author who ever lived.

Before we conclude, I wish to advert to one or two facts connected with diseases of the thoracic viscera, which have lately come under our notice. In the case of a woman who died in the chronic ward, we had observed, during life, pulsation of the jugulars, and on dissection found hypertrophy and dilatation of both the left and right sides of the heart. We examined the bicuspid and tricuspid valves with great care, and found that they had been able to discharge their functions during life perfectly. How this can happen, unless the different component parts of these valves had become enlarged along with the other parts of the heart, it is not easy to imagine; and indeed I am inclined to think, that under the circumstances which force nature to adopt the expedient of giving more strength and capacity to the auricles and ventricles, she does not neglect to meet the increased size of the auriculo-ventricular openings, which, beyond doubt, ensues in many of these cases, by causing a corresponding growth, not only in the columnæ carneæ and chordæ tendineæ, to which the valves are attached, but also by conferring on the valvular plates themselves an augmentation of thickness and surface. I think that this augmentation really takes place, but am unwilling at present to assert it positively. If it does, it adds another to the many beautiful illustrations already known, of the providence and wisdom of nature in the construction and proportions of even diseased structures.

TEMPERATURE OF VEGETABLES.

To the Editor of the London Medical Gazette.

Southampton, Feb. 15, 1831.

SIR,

DURING the late storm of snow I was induced to investigate the cause of its

dissolving, to a certain distance, round shrubs and plants, whilst the stratum elsewhere remained unaffected: every one must have remarked the same phenomenon, though the cause may not probably have been so obvious. The temperature of the atmosphere in the above instance was thirty-two degrees of Fahrenheit, and the snow was thickly scattered. On applying the thermometer to the ground, its bulb being immersed in the snow, the mercury, as was expected, indicated the freezing point; but, on removing it to the shade of a small cedar tree, it manifested in the space of twenty minutes an increase of temperature by nearly two degrees, being almost 34° F. at which indication it remained permanent. On being removed to an open area, freed from the snow by my hand, the column of mercury sunk to 32° F.; and again ascended to the same indication of near 34° , on being replaced beneath the same shrub. This peculiarity induced me to repeat the experiment under a small box-wood tree, around which the snow was also dissolved, but not to the same extent, nor so perfectly, as around the cedar; the thermometer, however, still remained a degree and a half above the freezing point. On placing it under another tree, (the rhododendron chrysanthemum,) it fell to $32\frac{1}{2}^{\circ}$ F. being only half a degree above the atmospheric point, and nearly one and a half below the indication as exhibited by the cedar.

The causes of these diversities of temperature, as evinced by the radiation of different shrubs, are, I think, twofold; the first being the colour of the leaves, and the second the quantity contained on each; but the first, or colour, is the peculiarity to which I attribute the influence, as the cupressus communicated to the thermometer an appreciable increase beyond the polygala (box), and the polygala a very decided contrast to the chrysanthemum, thus exhibiting a direct ratio between the radiating powers and the quantity and colour of the leaves of each. There is an evident effect, however, to be attached to the quantity also of the leaves, as those of the rhododendron have a similarity in point of colour to the polygala, but a striking difference in point of number, having a diminution of three-fourths less than the last. The colour of the leaves on the cedar is the darkest green,

but that of the two others much lighter; the quantity on the first is also greater, though they be individually smaller; and hence the snow was dissolved to a greater circumference round its base than round the box-tree, and considerably more so than round the ephrasium, whose circle was the smallest and the least perfectly described.

Whether or not the vegetable economy is endowed with capacity for maintaining a certain temperature necessary for the preservation of its vitality in every degree of climate, is a question that may be fairly asked; if it is, it renders the analogy still closer between the two organic kingdoms, and establishes in a stronger light the words of Aristotle, that vegetables were merely animals turned inside out.

Reasoning *à priori*, we should be inclined to believe, that as they are capable of lowering their temperature by radiation in the warm tropical regions, they should also be able to maintain a given proportion for the maintenance of their vitality in more arctic ones.

That they certainly do maintain a temperature above the freezing point of the atmosphere, is evident from the perfect solution of the snow round their bases, whereas no such solution is to be seen beyond a certain distance from vegetation, till a change in the atmosphere above the freezing point is manifest. My own opinion is, that plants absorb the calorific rays distinct from light itself; or rather, that those rays which are purely luminous exert no specific influence, abstractedly considered.

But this is entirely matter of opinion, and I regret exceedingly that the prosecution of further experiments was prevented by a thaw, which deterred me from certifying myself of some collateral though pertinent ideas, naturally suggested by the subject. There is no doubt but the experiment is susceptible of greater accuracy than I had recourse to: thus two or three thermometers might have been used at the same time, namely, one suspended in the air, one immersed in snow, and a third immediately deposited beneath the source of vegetation.

The inferences deducible, however, from what has been already said, are, that vegetable bodies in general appropriate to themselves a given quantity of caloric, which quantity is modified according to the nature, quantity, and co-

lour of their absorbing surfaces, as leaves, bark, &c.; that they absorb caloric at all times, but more actively during the day, and at various stages of maturation; that they are endowed with a vital essence, by which their existence is maintained in both low and high degrees of climate, but that this element of preservation is subject to certain limits, beyond which, in either extreme of temperature, their living principle is destroyed.

I am, sir,

Your obedient humble servant,
T. COOPER,

Member College of Surgeons of Edinburgh.

PHYSIOLOGY OF THE IRIS.

To the Editor of the London Medical Gazette.

Sloane-Street, Chelsea,
5th Feb. 1831.

SIR,

THE following remarks are intended to shew that motion of the iris is not excited in consequence of any relation of *sympathy* between it and the retina, as, I believe, is generally supposed; but that it results from the action of light on the sources of its sensibilities—the ciliary nerves—as they traverse the eye between the choroid and sclerotic.

That the iris is simultaneously affected with the retina, and the mobility of the one more or less deranged with derangement of the other, is sufficiently evident; and this, coupled with the well-known fact of the insensibility of the iris itself to the *direct* impingement of light, has strengthened the belief in some peculiar sympathetic connexion between them. I think, however, it may not be difficult to prove this correspondence in action to arise from a different relation than that of sympathy; and it will be seen hereafter that the iris acts in consequence of its relations with the ciliary nerves, and not of its relations with the retina; and that they both act consentaneously, in consequence of their having one common source of sensibility and excitement in those nerves.

The union of a branch from the third and a branch from the ganglionic portion of the fifth cerebral nerves in the lenticular ganglion, provides for the

supply and distribution of sensibility and mobility to the structures of the eye as they severally require it. The retina, no less than other parts of the same organ, derives its sensibility to light from this source, and consequently dividing the fifth cerebral nerve incapacitates it for vision, and produces blindness. Division of this nerve also deprives the whole eye of its sensibilities, and destroys its textures. Under these circumstances the retina and iris are equally paralysed. Paralysis of the iris also ensues from division of the third nerve, but the other structures are not affected by it.

All the phenomena of vision depend primarily and essentially upon the action of light on the source of all ophthalmic sensibility—the ciliary nerves. It is not sufficient that the *retina* receive the rays of light, the ciliary nerves must also be subjected to their influence through the choroid, or vision does not take place. It is in consequence also of the stimulus of light acting on these nerves that the motions of the iris are excited; and thus it is that, when opacity or other derangement of the transparent media arrests the progress of light, the iris is motionless.

I need scarcely stop to prove the physical possibility of light finding its way through all intervening structures, when in a state of integrity, to the ciliary nerves. There is, in fact, nothing anterior to the sclerotic of sufficient density to intercept its rays. The *pigmentum nigrum*, the most dense, serves only to temper its intensity, and seems admirably adapted as a protection for the delicate sensibilities of these nerves. It is not, however, enough to say that light *may* reach the sclerotic; it is evident that it *must* do so, for want of a structure of sufficient density to arrest it.

The phenomena the iris presents in disease of its contiguous or related structures, tend to prove the dependence of its motions upon the access of light to the ciliary nerves. In cataract, for instance, it preserves its mobility, because the exclusion of light is not complete; but in some varieties of cataract, in which the obstruction is complete, the iris is motionless.

* Patients who have milky cataracts

generally distinguish light from darkness very indistinctly, and sometimes not at all; partly because the cataract, when it is thick, lies so close to the iris that *few or no rays of light* can enter between them *into the eyes*."

In amaurosis, when complete, the same immobility of the iris is observed. This may be occasioned in two ways, either by the choroid and ciliary nerves being involved in the disorder of the retina, or by the retina, from some change in its sensibilities and structure interposing, as an opaque and foreign body, between these nerves and the light. That such changes of the structure of the retina do supervene upon disease, the records of surgery abundantly testify.

But in amaurosis the iris is not always motionless, in which case it is probable that light has access to the ciliary nerves through such parts of the retina as are not involved in the disease; for "it is remarked by Richter, that patients who may be said to be entirely blind, sometimes have a *small part of the retina which is still susceptible of the impression of light*."

There are, of course, other causes upon which the degree of mobility displayed by the iris will depend—as changes in its structure or in its relations; affections of the third, its motor nerve, of the fifth, or of the brain; and upon other constitutional or local disturbance.

There are certain disordered states of the eye in which the sensibilities of the ciliary nerves are so much increased that any degree of light, however moderate, can hardly be endured. The iris, of course, is similarly excited, and the pupil is almost obliterated. In those unhappy individuals whose ciliary nerves are exposed to the full intensity of the light of day, unprotected by the *pigmentum nigrum*, vision is equally painful and distressing.

Having thus hastily and very imperfectly inquired into some of the phenomena of impaired vision, as influencing the mobility of the iris, I can draw no other conclusion than that its motions are excited by the influence of light on the ciliary nerves posterior to the choroid. I also infer that these nerves are principal and primary agents in vision;

* Cooper's Surgical Dictionary.

* Cooper's Surgical Dictionary.

that by them only we have perception of light, and that the function of the retina is that of consciousness, or of ability to ascertain and determine the nature of the relations entered into between the eye and that portion of the external world to which its powers are adapted and confined.

EDMUND BOWDEN.

BARBADOES ALOES.

To the Editor of the London Medical Gazette.

SIR,

I HAVE found a pill of the *Barbadoes Aloës*, with or without a chalybeate, so useful, that I am induced to send the mode in which such a pill may be prepared, for some corner of your publication.

The aloës should be dissolved with an equal portion of soap, and twice its quantity of the extract of liquorice, in water at the boiling heat; the solution should then be carefully strained and reduced, in a water bath, to the proper consistence. Four or eight grains of this mass, made into one or two pills, and taken at dinner time, or at bed time, prove a very efficient aperient, and but seldom induce piles. Occasional doses, however, agree the best.

In the chalybeate pill the sulphate of iron may be substituted for the soap. Four or eight grains, taken daily, generally induce the due evacuation of the bowels, and agree as a chalybeate.

The former of these may be termed the *pilula aloës diluta*; the latter the *pilula aloës chalybeata*. A reference to your pages will always prevent the trouble of writing a long prescription, if you shall think this little communication worthy of insertion.—I am, Sir,

Your obedient Servant,

M. II.

Feb. 22, 1831.

MEDICO-CHIRURGICAL SOCIETY.

THE annual election of officers took place on Tuesday, March 1, when Mr. Lawrence was chosen President.

It is intended to change the place of meeting, so as to bring the Society further westward—probably to the neighbourhood of Charing Cross.

ANALYSES & NOTICES OF BOOKS.

“L'Auteur se tue à allonger ce que le lecteur se tue à abrégé.”—D'ALEMBERT.

Précis d'Anatomie Pathologique. Par G. ANDRAL, Professeur à la Faculté de Médecine de Paris, &c. &c. 1829.

A Treatise on Pathological Anatomy. By G. ANDRAL, Professor to the Faculty of Medicine of Paris, Member of the Royal Academy of Medicine, of the Council of Health, &c. &c. Translated from the French by RICHARD TOWNSEND, A.B. M.D. M.R.I.A. and WILLIAM WEST, A.M. M.D. M.R.I.A. Vol. II. 8vo. pp. 808. 16s. 1831.

[Concluded from page 688.]

IN our last number we began a sketch of that part of Andral's valuable system of pathological anatomy which relates to the alimentary canal: our object is, by selecting one important portion of the body, and faithfully, though in a very condensed manner, analyzing the account of its morbid conditions given by the author, to afford our readers at once the means of judging of the work as a whole, and, at the same time, a short but comprehensive treatise on the pathology of the stomach and bowels. It was our wish that the whole article should have appeared in one number continuously, but as the press of matter rendered this impossible, we shall only remind our readers that we have gone over the subjects of “the Alimentary Canal considered in a State of Health,” while, of its diseased conditions, we have already spoken of those which consist of *Lesions of the Circulation*. This brings us to

Lesions of Nutrition.

Hypertrophy of the alimentary canal is first considered, and is spoken of under different heads, according to the structure affected; for though the increase of bulk from excess of nutrition may extend through all the coats of the bowel, it may nevertheless be confined to one or other exclusively. *Hypertrophy* of the mucous membrane is the form of this change of structure which most frequently attracts notice, and the various appearances of elevations, projections, patches, and tumors of differ-

ent forms, sizes, and consistencies, are minutely and very clearly described. Under this kind of excessive growth of the mucous membrane are comprehended those usually described under the names of excrescences, vegetations, fungi, polypi, &c. The follicles frequently participate in this preternatural growth, and this augmented size of these parts is often the only morbid appearance found in those who have died of long-continued diarrhœa. Sometimes the orifices of such follicles become enlarged, so that their wide-gaping mouths are mistaken for ulcers: at other times the orifices become obliterated, and the secretion continuing while its exit is cut off, gives rise to the formation of tumors, particularly in the horse, and some other of the lower animals.

The subjacent cellular tissue sometimes becomes thickened and indurated—a circumstance worthy of remark chiefly because this change has frequently been confounded with schirrus, there being, however, nothing malignant in its nature. It is most common in the stomach and great intestine, and occasionally proceeds to such an extent as to obliterate all appearance of the muscular coat. In other instances, however, this latter also becomes hypertrophied, presenting a semi-transparent and bluish appearance.

Atrophy of the alimentary canal may take place either throughout or at particular parts, and may pervade all or only some of the coats. Its most frequent seat is the splenic end of the stomach, and next to that the lower part of the small intestine.

Softening of the alimentary canal is one of the most common changes of structure met with in these parts. The mucous coat is its most frequent seat, and it here presents the appearance of a more or less diffuent pulp. It is a change very common in the stomach, and in the form in which it occurs in children, has of late attracted the notice of various writers. It is either acute or chronic: in the former case it is often the result of irritating poisons, but sometimes occurs without this obvious cause.

Ulceration of the alimentary canal is next and elaborately described. We subjoin an account of the relative frequency of ulcers in different regions, and of the forms they chiefly assume.

“With respect to the frequency of their occurrence, they may be arranged in

the following manner:—1, The ileum in its inferior two-fifths; 2, the cæcum; 3, the colon; 4, the rectum; 5, the ileum in its superior three-fifths; 6, the stomach; 7, the jejunum; 8, the duodenum.

“The forms of the ulcers may generally be reduced to the following:—

“1. *The circular form.*—This is often so regular, that the ulcers appear as if made with a punch, and exhibit a strictly geometrical circle.

“2. *The ovalish form.*—This appears particularly in the ulcers situated in Peyer's glands.

“3. *The linear form.*—The ulcer here appears as a narrow groove, which resembles a geometrical straight or curved line.

“4. *The irregular form.*—This cannot be compared to any geometrical figure; and, what one would not suppose *à priori*, is the least frequent of all.”

The bottom of such ulcers may be formed by a thin layer of the mucous membrane still undestroyed, in which case it is the villi which have disappeared, and whose loss causes the *erosion*; this, however, is not so common as it is to find the mucous membrane perforated, and thus the bottom of the ulcer is formed by one or other of the remaining coats. It is an important remark of M. Andral, that there is no proportion between the intensity of the hyperæmia of the mucous membrane and the liability to ulceration. Sometimes, when ulcers are present, the membrane is remarkable for its unusual paleness. The question, whether ulcers of the bowels cicatrize, is discussed, and answered in the affirmative, nor do we apprehend that any doubt can exist on this point. Some of Bright's cases are perfectly satisfactory, and preparations now exist in most of our museums which demonstrate the fact.

Perforations of the alimentary canal may occur as the result of ulceration, which, having made its way from within as far as the peritoneal coat, at length destroys this also. It is a fact pretty generally known, too, that these perforations sometimes take place in cases where, up to the time of such occurrence, no formidable disease has been suspected. The following instances are in point:—

“I shall mention but two cases illustrative of this, though I could easily

bring forward many others. A middle-aged man had for a long time experienced at intervals pretty severe pains in the epigastrium; his digestion was rather difficult, but his health did not appear deranged in other respects. He was quite suddenly attacked with all the symptoms of a very acute peritonitis, and died in less than four-and-twenty hours. On opening the body, a sero-purulent effusion was found in the peritoneum, and near the middle of the body of the stomach was an ulcer of the breadth of a franc piece, with a blackish margin, in whose bottom, which consisted of the muscular coat, was a perforation, at most but large enough to admit of the passage of a lentil: its margin was formed by the torn peritoneum. There was no other lesion in the stomach, nor in the rest of the canal."

M. Andral doubts the possibility of the *ascaris lumbricoides* perforating the bowels, but in this we do not agree with him; some cases have recently been recorded which seem pretty conclusive on this point.

Changes of capacity in the alimentary canal.—Under this head we have an account of the various circumstances under which the dimensions of the stomach and bowels may be increased or diminished; and the question of the *obliteration* of the alimentary tube leads to the consideration of

Introsusception.

With regard to this the explanation of M. Dance, as to the relative situation of the coats of the intestine, is worthy of notice. The mucous membrane is innermost, next come two serous surfaces in contact, and more externally two mucous surfaces also in contact; now this relative situation serves to explain how the introsuscepted portion may be detached and voided per anum, without any effusion into the cavity of the abdomen, namely, by the two serous surfaces becoming united. There is not in the range of pathological phenomena any one which illustrates more forcibly the curative powers of nature than when we see large portions of the bowels passed by stool, and the patients afterwards recovering: this is a rare event, nevertheless it sometimes occurs, and even when the patient does not ultimately recover, the curative process is very distinctly marked.

"Hevinus saw two cases of this description; one of the patients passed twenty-three inches of the colon, and the other twenty-eight of small intestine. The preparations were presented to the Académie de Chirurgie. M. Cruveilhier shewed the Société de la Faculté de Médecine a coil of intestine eighteen inches long, with some of the mesentery adhering to it. It was passed by a man who for several days had all the symptoms of strangulated hernia, which ceased as soon as it came away. I had an opportunity of examining a preparation sent to the Académie Royale de Médecine by MM. Bouniol and Rigal, and ascertained it to be a portion of the small intestine, about thirty inches in length, with a small bit of the mesentery adhering to it. The subject of the case had had an excessive surfeit, after which he was seized with all the symptoms that announce strangulation of the intestine; he had besides in the right iliac region an uneven tumor, which was very sensible to the touch. At the end of twelve days he passed the portion of intestine and mesentery in question; upon which the symptoms disappeared, and he recovered, retaining only a feeling of pain in the right iliac region. In three months after, having eaten an enormous quantity of cherries, he was attacked with the symptoms of peritonitis, and died. It is a pity the body was not examined; there would, probably, have been found a rupture of the cicatrice, which must have been formed where the expelled portion of intestine had been detached. In other cases, however, there has been an opportunity of ascertaining the condition of the alimentary canal in persons who died in a longer or shorter time after having expelled a portion of intestine by the rectum. A case of this kind is related by Hevinus:—A man, who had all the symptoms that characterize internal strangulation, passed a long portion of intestine, composed of the whole of the cæcum, six inches of the ileum, and six of the colon. Twelve days after this he died. On opening the body, the following appearances were observed: the cæcum was wanting; the ileum opened into the colon, with which it was intimately united; at their point of junction was a narrow aperture which led to a collection of pus, situated in front of the right kidney, and circumscribed on all sides by

false membranes. Another fact of this kind is recorded in the second volume of the *Bulletins de la Société Philomatique*. It relates to a man who died forty-four days after having passed by stool a portion of the small intestine, sixteen inches in length. M. Dumeril saw the preparation. On examination after death, the following peculiarities were discovered:—"The two extremities of the intestine were perfectly united, and appeared as if their edges had been bevelled, and then fitted exactly to each other. They had contracted strong adhesions with the peritoneum at their junction; nevertheless their cavity was not sensibly diminished, even at the cicatrice. The deficient portion belonged to the jejunum and ileum."

Faults of *dimension, configuration, and situation*, as well as *imperforation* of natural apertures and *preternatural communications*, are severally considered.

This is followed by a description of the *lesions of secretion*, the only point connected with which that we shall notice is the formation of intestinal concretions, several curious examples of which are given.

"CASE I.—A man, sixty years of age, had for a long time experienced, whenever he took any food, violent spasms in the stomach, accompanied by a sensation of burning heat in that organ, and the eructation of a fluid so acrid as to ulcerate the pharynx and corrode the enamel of the teeth; in addition to this he laboured under vomitings, which recurred several times a day, a continual feeling of weight and distress in the præcordia, dislike to food, habitual constipation, and almost total sleeplessness; at last he fell into a gradual decay. . . . One day, while vomiting, he threw up a calculus, which gave him some relief; the next day he threw up another. The first weighed a drachm, the second half a drachm. Soon after this he completely recovered.

"CASE II.—Dr. Camille Piron showed me a woman who had all the symptoms, both local and general, of a schirrous affection of the pylorus, which disappeared after she threw up a calculus of the size of a nut, which had probably obstructed the pyloric orifice. It consisted almost solely of cholesterine.

"CASE III.—A child, eleven years old, had from his infancy been subject

to severe pains in the abdomen and diarrhœa. He was lean, eat little, and was tormented with a burning thirst. In the right hypochondrium was felt a hard tumor, which seemed to belong to the liver. Vomitings set in, and the patient sunk. On opening the body, the intestine was found distended at the meeting of the ascending and transverse colon, by a calculous concretion, six inches in length, and twelve ounces and a half in weight. It was separated from the parietes of the intestine by a layer of thick mucus, and consisted of three portions, articulated, as it were, to one another. The first occupied the ascending portion of the intestine; another the transverse; and between them was the third, which was concave on one surface, and convex on the other.

"CASE IV.—A young man, aged eighteen, eat during the month of June 1814 a great quantity of green plums, and swallowed the stones. In a few months afterwards he began to feel pains in his belly, but not severe enough to prevent him from working. After some time they became more severe, and were accompanied with an obstinate diarrhœa. On feeling the abdomen, a hard circumscribed tumor could be discovered, which appeared to be an alvine concretion, but could not be expelled by any kind of medicine: the patient died in a state of marasmus. On the body being opened, there were found in the left portion of the transverse colon three concretions united together, and a fourth a little lower down, in the centre of which was a plum stone.

"CASE V.—A woman, aged fifty, was attacked with a severe pain in the right hypochondrium. Soon afterwards she presented all the symptoms that indicate an obstacle to the free course of the fecal matter in the intestines, such as hiccough, nausea, vomiting of stercoraceous matter, meteorismus, and rapid prostration of strength. These symptoms disappeared after the patient had passed by stool three calculi; the first of which in form, colour, and size, resembled a large chesnut, the second was as big as a pigeon's egg, and the third, which was triangular and flattened, was of the same bulk as the second. They consisted in a great measure of cholesterine."

The fourth "article" is devoted to an account of the *entozoa* found in the

alimentary canal—a subject too familiar to our readers to admit of our entering upon it.

The fifth and concluding article relates to the state of the alimentary canal in different cases where its functions are deranged, under which division the author, we think rather inconsistently, introduces an account of its condition in fever, as if this did not consist of different modifications of the hyperæmia, (to use his own word,) ulceration, &c. previously described. This section also embraces a consideration of the doctrines of Broussais and others, and would require an entire article to do any degree of justice to it; whereas we find that we have already much exceeded the space we had intended for the present analysis.

COLLEGE OF PHYSICIANS.

Monday, Feb. 28.

SIR H. HALFORD, BART. IN THE CHAIR.

Dr. Heberden on the Management of the Sick.

THE second evening meeting of the season took place on Monday, and was numerous attended—there being present several distinguished visitors, and many eminent practitioners in the different departments of the profession.

The registrar read a paper by Dr. Heberden, consisting of “*Remarks upon the Principles to be observed in the Management and Cure of the Sick.*” The essay contained many judicious observations, but scarcely of a nature to admit of, or warrant, our giving a close analysis. The general principle insisted upon was the impropriety of adopting certain undeviating methods of cure, and prescribing certain remedies as specifics, without due regard to the peculiarities of each individual case. These doctrines were illustrated by numerous and apt classical quotations; and, indeed, the whole composition impressed us with the idea of its proceeding from a gentleman and a scholar, rather than from a physician well acquainted with the actual state of medical practice. Many opinions which were stated were so undeniably true—so entirely familiar to every professional man of but tolerable acquirements—that the necessity of formally adducing them, was any thing but apparent.

The best illustration of the preposterous misapplication of medicine which the paper contained, was one regarding calomel. The author stated, that but a few days before, he had received a letter from a lady who had spent some years in painful attendance upon her husband, who was palsied; at length he died, and left her worn out in body and mind. She thus described her complaints:—“The first sensation I feel is a rumbling in my bowels, which gradually mounts upward till it gets to the pit of my stomach; then I feel a fluttering like a bird confined. I have then violent palpitation, and a heavy pain, which extends from one breast to the other till my breath is nearly stopped. Sometimes it goes off in a violent hysteric, to which I have been many years subject. I can neither eat nor sleep, and am as thin as a lath.” It would be difficult to imagine a more exquisitely marked instance of hysteria; nor can it fail to excite surprise, that a practitioner should any where be found, at the present day, capable of treating such a case by the means which were here adopted, namely, large doses of calomel over night, followed up by salts next morning, for several successive days.

Dr. Heberden next proceeded to observe, that many diseases are still treated on limited views and erroneous principles; for example, that acidity of the stomach was not to be cured by absorbents merely, without attention to diet and regimen; nor the tendency to the formation of worms merely by their expulsion; nor dropsy by the evacuation of the fluid, without regard to the causes which had led to the effusion.—These are among the truisms which the paper contained.

Dr. Heberden doubts the conclusions with regard to the concentration of the active principles of drugs deduced from chemical analysis, and thinks that many medicines are rendered more efficacious, and less irritating, not only by various forms of combination, but by a certain extent of simple dilution, giving as an example the familiar illustration of salts becoming more mild and efficient in their operation when dissolved in a large quantity of water.

ROYAL INSTITUTION.

Friday, Feb. 25, 1831.

B. B. CABELL, ESQ. F.S.A. VICE-PRES.
IN THE CHAIR.*Mr. Cowper on recent Improvements in Paper-Making.*

SOME time since Mr. Millington, the late Professor of Natural Philosophy in the Royal Institution, submitted to the members an account of what had then been done with respect to the application of machinery to the making of paper; and Mr. Cowper came forward this evening to communicate some further very important modifications and improvements, by which the price, texture, and size of paper, has become already, and will become hereafter, very considerably affected—*e. g.* antiquarian was formerly the largest sheet of paper that could be made, its frame being the utmost that a man could grasp with his extended arms: *i. e.* necessarily less than a fathom long;—but now, by the introduction of a large stuff chest, on which the pulp is kept in continual agitation by revolving arms, a vat in which the *stuff* (a technical term for the pulp prepared from rags) is subsequently received, and mixed with an additional quantity of water, to render it sufficiently fluid to run out freely, and an extended wire-gauze plane to diffuse it upon, which may be continued to any wished-for length, a single sheet of paper is often made three quarters of a mile long; nay, one sheet has been drawn off four miles in length! Long paper, indeed! dedicated, we presume, to the especial service of gentlemen of the long robe; long enough for a chancery suit, or for the exhibition of the talents of the most accomplished special pleader.

The nascent paper, when thus drawn off on wire gauze, had subsequently to be transferred to strata of flannel, or some other absorbent surface, and forced between powerful rollers, to express the extraneous moisture, before its first stages of transformation were accomplished; but the unwieldy length of the wire gauze in this improved apparatus, the necessity of removing the half-set pulp from it to the absorbent strata, the passing it for expression between the rollers, &c. &c. made even this improved process a troublesome operation, and, above all, the admixture of chloride of lime with the pulp, for the purpose of bleaching it, rendered the

paper dusty and gritty, and often so impaired its fabric that many sheets would fall to pieces on the slightest pressure. Lately, however, this has been obviated by the direct application of gaseous chlorine, and the machinery has likewise been very much improved by the substitution of a cylinder of copper-wire gauze for the unwieldy extended plane, and by the use of atmospheric pressure instead of the cumbrous rollers. This latter improvement has been effected by causing one segment of the wire gauze-cylinder to be separated from the rest by air-tight partitions; and then, as the pulp passes over it, exhausting the air by means of an air-pump, so that the weight of the atmospheric column at once expresses the water from the semi-fluid pulp, and sets the sheet of paper. This, indeed, is only a modified reversion to the old plan, for when paper was made by hand alone, the workman in withdrawing the frame from the stuff-vat, always so lifted it as to form, by its under box-like cavity, a partial vacuum, (just as occurs in lifting an inverted cup or glass out of a vessel of water,) so that the air, as above, effected the expression of the superabundant water.

When paper was made without machinery, even the simpler and earlier parts of the process were slow and tedious in the extreme, as may be conceived when the labour (as, for instance, merely of the cutting of the rags) had to be performed by hand, which is now done by several large pairs of shears, two feet long, and which make 180,000 cuts in a minute. How many pairs of human hands must have been fatigued with this one preparatory part alone! Again, formerly the utmost paper that two men could make was only five reams per diem; now a single machine will make sixty reams in the same space of time.

Until very lately, one-sixth part of this quantity was wasted by the imperfect mode of cutting; for the paper being rolled in the making round a cylinder, the outer layers were of course much larger than the inner, and when cut through from the circumference to the centre, a second cutting was required to reduce the whole to one size, and this caused one-sixth of the paper made to be made in vain. Now, however, a cutting machine has been invented (of a very ingenious construction, but of which words alone could

give a very imperfect idea) by which the whole of this waste is saved; for, instead of relieving the cylinder from its burden, by cutting the concentric circles through, the cutting machine unrolls and cuts the *miles* of paper into usable and equal sheets.

Paper of 12 yards long is chiefly used for paper-hangings, and now each piece is printed on one entire sheet, although for some time after sheets of this enormous length were made, the revenue laws compelled them to be cut into short small sheets, which the paper-hanging manufacturers had again to join together,—so much for the rigour of the laws.

In the Library were numerous anatomical models, engravings, &c. by Schloss, which latter seem to be well done, and are very cheap. We likewise noticed Prideaux's new scale of chemical equivalents, which appears to have been constructed with much care and labour. As to Scholl's specimens of picture silk-weaving, although probably very clever trifling, we cannot say much in commendation. This compelling the loom to perform imperfectly the labours of the pencil, appears to us the perversion of valuable means to useless ends: it is something like the ass fancying himself a lap-dog, or a boor showing his agility by running in a sack, or catching a pig with a soapy tail.

On Friday, 4th March, Dr. Clark will give some account of Vesuvius and Pompeii.

MEDICAL GAZETTE.

Saturday, March 5, 1831.

“*Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso.*”—CICERO.

PREJUDICE AGAINST DISSECTION.

THERE were two or three points in Mr. Guthrie's opening lecture on Tuesday worth adverting to. The first was the piece of information which he conveyed to his auditors about himself and his feelings—always an interesting subject, whoever may be the speaker—namely, that *he* (Mr. Guthrie) would not like to be dissected; and that such is his abhorrence of having that process performed

on his body after death, that, if he had but one friend in the world, and that friend intimated that he should give up his (Mr. G.'s) body to the anatomists after death, if he had but one shilling in the world, he should leave it to some one else, and not to that friend. This, to be sure, is clear enough, and to be taken at its proper value. As an individual confession of undefineable and superstitious horror (for we cannot call it by any other name), it is curious; and not the less so as it comes from an individual of Mr. Guthrie's attainments and standing in the profession. But it is only curious. Upon its announcement, in the lecturer's energetic and fluent tones, it excited in his auditory no feeling but that of surprise—no sympathy; and, as it appeared to us, the fact seemed to be communicated rather for the sake of producing *effect*, than for any other perceptible reason. If this was really Mr. G.'s design, he was very successful; but if he intended more—to excite or to encourage a kindred horror and antipathy in the bosom of any of his hearers—he must have been sadly disappointed. The learned professor ought to know, that for the one medical man who thinks as he does, a thousand think differently—nay, that his case is almost altogether singular; and, accordingly, he had no right to assume, as he seemed to do, that his was the general feeling of the members of the profession. Nor should Mr. Guthrie have ventured upon another ill-advised statement, regarding the opinions of a very large portion of his professional brethren. We were perfectly astonished to hear him deliberately say, that those who objected to the dissecting of murderers, professed to do so in order to render dissection fashionable. —To render dissection fashionable! why, the professor could not have been serious; he must have been indulging himself in a vein of pleasantry,

or at all events of exaggeration ; though from the length of time he spent in ridiculing and exploding the (fanciful) notion, we rather think he *was* serious. In order to show how impracticable it was to render any thing fashionable by law, he referred to certain sumptuary statutes which were intended to regulate ladies' and gentlemen's dresses—but which had fallen into complete disuse ; “ and so would any laws which were designed to render dissection fashionable.” This is sophistry indeed, but of no very ingenious description. Needs Mr. Guthrie to be told, that no advocate for the utmost license in dissection, ever dreamt of so absurd a thing as the rendering it *fashionable* ? If he does, well might he pursue his strain of paradox, as he did, and say that he never heard a single argument or reason why the obnoxious part of the murderer's sentence should be discontinued.

The same complaint of the employment of sophistry and paralogism lies against that part of Mr. Guthrie's lecture in which he inveighed against the appropriation of the unclaimed bodies of the poor. We must say we never heard a weaker case than that which was put forward by the lecturer. Here, while he positively declared that “ he never heard a single argument from his opponents in favour of their views,” (in saying which he plainly acknowledged a very limited acquaintance with the state of the anatomical question) he did nothing himself but dogmatise on the unfairness of drawing a line of distinction between the rich and poor—confounding the unclaimed poor with the well-appointed rich. His great error (one which we believe is common to him with many unprofessional people) is, that he holds we should not presume to dispose of the bodies of the forsaken friendless poor, until we voluntarily devote ourselves, and our friends and relatives, to the purposes of anatomy—forgetting that in the latter case the feelings of the

living are inevitably outraged ; in the former, no one's. “ Why,” said the professor,—“ to take an example from a neighbouring country, — why did the private professors of Paris, the other day, in petitioning the minister for an adequate supply of bodies, beg of him to be so good as to give them a share of those who died deserted in hospitals and jails, and never attempt to ask for the body of Benjamin Constant, or of General Foy, or of others of that rank ? Why because they knew it was hopeless to make any such request. They knew that the rich and powerful would never consent to have any of their order submitted to the knife ; the natural feeling of prejudice to such a proceeding, they knew was too strongly implanted in the breasts even of the educated.” Nothing can be more unobjectionable than the inference of Mr. Guthrie ; but is this the only inference to be drawn from the forbearance of the French teachers ? Assuredly not : there is another fully as obvious, unobjectionable, rational, and clear.

We cannot omit to notice another point in this opening lecture, as its introduction was in a great measure owing to ourselves. It will be remembered by some of our readers that last year, on a similar occasion, Mr. Guthrie, in endeavouring to shew that the dissection of murderers had no effect in rendering dissection generally unpopular, referred his auditors to the case of the Irish metropolis ; “ where,” said he, “ murderers have been lately dissected in the most public manner, and yet the business of the schools has gone on undisturbed.” This statement, immediately after it was delivered before the College, we felt it our duty to controvert. We shewed that Mr. Guthrie was misinformed ; that the real state of the case was directly the reverse ; that, in fact, dissection never perhaps was so unpopular in Ireland as at the period referred to by

Mr. G., and that his illustration consequently was peculiarly unhappy. On Tuesday, however, the lecturer thought proper to bring the matter forward again; and in alluding to our censure of his mistake, candidly admitted the fact of his error, but took occasion to attribute the unpopularity of dissection in Ireland, at the time in question, to another cause than that to which we had referred it. The assigning of *any* cause for the actual state of things was only a secondary object with us when we made the remarks alluded to; the fact alone was all that we were anxious to state correctly: and even as it is, we have no intention of attempting at present to investigate causes. But as Mr. Guthrie seems to admit our statement only limitedly—conceding that dissection in Ireland *was* unpopular at the time of the experiments being performed on the murderers, while he insists that, generally speaking, his position is correct that the practice of anatomy, unless when interrupted by incidental causes, among which the dissection of murderers is *not* to be reckoned, goes on smoothly, “freely and fairly,” as he says himself, in the sister kingdom—we beg leave once more to differ with him on the matter of fact; our persuasion, our certain knowledge, being, that dissection is not one jot more popular in Ireland than it is in this country. Our reasons Mr. Guthrie will find if he take the trouble of turning to that article of ours to which in the course of his lecture he alluded; but at present our space will not permit us to entertain the subject further.

COLLEGE OF SURGEONS.

THE lecture on Tuesday passed off very quietly, and without any attempt at interruption or disturbance. We stated last week what must necessarily be the fate of Wakley's resolutions. So far

from it being true that they have been transmitted to the Lords of the Admiralty, the Council have not taken, and do not intend to take, any notice whatever of them. (See the subjoined note sent to us by Mr. King).

To the Members of the Royal College of Surgeons, in London.

GENTLEMEN,—Having applied to Mr. Keate to know what decision the Council had come to, relative to the resolution unanimously adopted by you on behalf of our colleagues in his Majesty's navy, on the day of the Hunterian Oration, I can now inform you, that the Council, considering our proceedings irregular, have found it impossible to act upon that document. Deeply regretting this impossibility in a case so urgent, I have the honour to remain,

Your faithful servant and confrère,
T. KING.

10, Hanover Street, Hanover-Square,
March 2, 1831.

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE,

DELIVERED BY DR. ELLIOTSON,

February 14, 1831.

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THERE were but three cases, gentlemen, presented last week: the patients were all women. One was a case of inflammatory dropsy; another was a case of hysteria; and the third was disease of the heart.

Hysteria from Imitation.

The case of *hysteria* occurred in a little girl, and illustrated one of the causes of the disease, which I believe is not very unfrequent—the propensity to *imitate*. The history of this girl I know perfectly well. Sarah Ireland, æt. 16, had suffered hysterical attacks for nine weeks. She was servant maid in a house in which it so happened that I was sent for to one of the family, a few months ago. The patient whom I was called upon to visit was a very interesting and excellent young lady, in an hysterical delirium, partly unconscious of what passed around her—singing and talking incoherently. This young lady died, and after her death I understand that another female in the family, but of what description I do not know, whether one of the daughters or a servant, became hysterical. This young woman, who came into the hospital, likewise fell into the disease, so that, from one being seized with it, two others became affected, and the character of the hysterics

was precisely the same in all of them—they all took to singing innocent songs, and talking incoherently.

This patient was admitted upon the 1st of February, and the disease had continued up to the very moment of her admission. Soon after she came into the ward she had a regular fit of hysteria, and therefore the disease had not ceased at her admission—nay, it had not declined. I had her cupped instantly in the loins to sixteen ounces, and, on account of her great flatulence, she took two drachms of the confection of rue, three times a-day, and was put upon low diet, and from the day of her admission she never had a fit. Although she had had the disease incessantly for nine weeks, and had a fit within half an hour of her admission, yet from that moment the disease ceased.

Now it would be wrong for me to assert that I cured the patient; but had I known nothing of her history, I should have thought certainly that I had cured her by the means I adopted. It is possible that I did cure her, but I think it is quite as possible that the disease ceased in consequence of her being removed from home. At home there was another person who was hysterical, and at home she had experienced the disease so long that she had no inducement to command herself, and was beyond the influence of the family. Here she was removed from the sight of the disease in another, and was with strangers of whom she was more or less afraid—not that the girl's disease was voluntary—not that the symptoms were voluntary; but in many of these nervous affections, if the patient can be unconsciously induced to exert a degree of restraint over herself, the affection becomes diminished, and will sometimes cease; and therefore I think it very possible that, from the fear of the new set of people around her—the fear of being well doctored, of being cupped without ceremony, and of being compelled to go through all the processes which we, in our wisdom, might think proper to adopt, the girl's disease ceased. The cure might arise from the impression thus made upon her mind, though I feel satisfied that there was not the slightest blame ascribable to her.

Now I will say a few words respecting these cases of hysteria. I need not tell you much of the character of the disease, as you know it perfectly well, and I have already spoken of it in a clinical lecture. You know that women are seized with complete, and more frequently incomplete, insensibility, and irregular convulsions; that they feel choked, and sob, and laugh, and cry; that the fit is not regular, and after they go out of one fit they fall into another. All this was the case here. Frequently, too, patients are delirious; they talk incoherently, and sing sometimes songs and sometimes psalms. But this case illustrates a fact of which I

am certain—namely, that this disease does not, as is pretended, necessarily arise from the state of the sexual organs, nor from sexual feelings. In the young lady who was the first subject affected in the house, it was quite certain—I think perfectly certain—from a number of circumstances with which I am acquainted, that the disease arose entirely from her extreme assiduity in charitably superintending some schools, and in superintending the education of some of her little brothers and sisters. It was her extreme anxiety, accompanied with an excessive degree of attachment to her family, that induced all this. From the character of the young lady, and from every circumstance around her, I am quite sure that no sexual feelings, either pure or corrupt, had any share in the matter; she had no attachment even to any individual beyond the domestic circle, and during her delirium she never once uttered an improper expression—never expressed a wish to see any human being except her father or mother, or her little brothers and sisters. When she sung, it was always hymns, and things of the most innocent description. I have no doubt that the affection was brought on in her by the state of her mind; but that was simply her attachment to her family and her extreme anxiety, which she had sometimes expressed, in regard both to them and to the success of a number of poor children, with whom she had taken a great deal of pains.

What occurred in the second patient I do not know, except that the symptoms were precisely the same; but in the third, the little girl who was here, there was no reason to suppose the disease arose from what is usually alleged to be its cause. In the first place, the uterus appeared unimpaired, and her catamenia were very regular. She was only 16 years of age, and had menstruated but four months from the first; but during these four months, and from the commencement of the affection, the catamenia had regularly appeared, and were very abundant. Then with respect to her mind, there was certainly not the slightest reason to suppose any thing of the kind, for if there had been, I think the disease would not have ceased the moment she was brought to the hospital. It is right to remember that she had had a fall upon the forehead, but I cannot think that it had any thing to do with the complaint, and for this reason,—the complaint had occurred in two females in the house before, and when we consider that the character of her hysteria was precisely the same as that of the hysteria of the other two, I cannot but ascribe it entirely to the impression made upon her mind by witnessing their disease.

The young lady was the first patient in whom I ever saw hysteria prove fatal. In general hysteria is a very innocent dis-

case; it is very troublesome, very annoying certainly, or it ought to be very annoying to a woman to make such an exhibition as women do in a fit of hysteria, but I had never known it dangerous in my life before. In this young lady it certainly was of an inflammatory character, for the pulse was very quick, the skin was hot, and the tongue was white and dry. Anti-inflammatory measures were freely had recourse to, and with considerable good effect. She frequently talked intelligibly; she was seldom, indeed, for a length of time, unconscious of what went on around her; but at last she became torpid—a degree of sopor existed—she was unconscious of what went on around her, and inflammation of both her hands and her wrists came on; and we thought—the medical gentleman who constantly attended her, and I myself—that fluctuation could be perceived. However, whether this was the case or not, the pulse was excessively feeble and fluctuating; and had we made incisions there, it would have been, I think, useless; at any rate, when the thing was mentioned before the family, a determination to prevent any thing of the kind was expressed, and she died a few hours afterwards. Unfortunately no examination of the body took place, and I do not know what the state of the interior was; but I must mention, that since then another case of hysteria has proved fatal—one which I did not attend, but the particulars of which were related to me, and I was present at the inspection of the body. I believe those gentlemen who attend my lectures on the theory and practice of medicine have heard me relate it before, but they must pardon me for alluding to it again; it is one of such an extraordinary nature.

Two young ladies of a very nervous temperament, active minds, excitable feelings, and *twins*, had for some years, and exactly the same length of time, been the subjects of fits of hysteria, accompanied with a choking sensation and convulsions, and in the fit they would continually be seized with a motion of the head and arms, regularly occurring in accurate time, and accompanied by the words "tic-tic," like a clock. This would sometimes be attended with insensibility, and sometimes they would be perfectly sensible—be conscious of it, and would occasionally say, "I cannot help it, but there is the tic coming;" and then "tic-tic, tic-tic," exactly like a clock. Now and then they would utter distinct words, "I cum, I cum," or "hi-cum, hi-cum," I do not know which, and what it meant I do not know. They at last both fell into a sort of trance—into a state of insensibility, or rather imperfect insensibility, as though they were in a deep sleep, but without any snoring; and the breathing was only very faint. It was not an apoplectic state, but really a state of sleep; and this continued for a length of time. One of them died, and I

was sent for to see the other. There was then present a symptom very common in hysteria—extreme sensibility of the surface of the trunk, so that the slightest touch with the end of the finger gave her exquisite pain—caused her to groan and nearly shriek, and say *hi-cum* two or three times, and then the head to begin moving from side to side, and the hands and fore-arms to semi-rotate in and out, in regular time, the motions being accompanied by the words *tic-tic, tic-tic*; the second word *tic* being pronounced, as usual, some notes lower than the first. This morbid sensibility of the surface has frequently been mistaken for inflammation, but is purely a state of the sentient nerves. If I opened her eyes, they remained for a minute fixed, as if they were looking at something to the left of her, and then the eyelids quietly shut. I recommended—seeing her in the trance—that she should be nourished as much as possible; that food should be got into her mouth; and when she appeared at last to be sinking very fast, sulphate of quinine was got down in considerable quantities. The difficulty of swallowing at one time had arisen to such a height, that after a tea-spoonful of any thing was put into her mouth, it was necessary to irritate the larynx, by squeezing at the situation of the arytenoid cartilages, and then she swallowed it. After every successive tea-spoonful was put into her mouth the larynx was pressed, and then she got it down. By the unwearied assiduity of the medical gentleman who attended her, being with her night and day, and feeding her himself, she survived, and at the end of three weeks I saw her again. Much fullness of the head had taken place in the meantime; there was great heat of the head, and a throbbing of the temples, and it was found necessary to apply leeches from time to time, and at the end of some weeks she was still alive, though still in a trance, but now and then half-waking. During one of these moments of consciousness she made a noise, and they gave her a pencil; she wrote what she wished in regard to her affairs, and then went off into the trance again. On another occasion she made a noise, and opened her mouth, so that her mother fancied she had a desire to eat. They gave her some food, of which she ate ravenously, and then went off again. I was witness to one of these returns of consciousness; she wanted some one, and shook hands with all around her, with me among the rest, and appeared perfectly conscious of her situation for several minutes. Perhaps she was never entirely senseless, for her eyes, like that of a cataleptic patient, mentioned by Dr. Heberden, were fixed in one direction, where her mother thought she fancied a deceased brother was present.

Now I allude to these cases for the purpose of showing that hysteria is sometimes fatal. The sister whom I did not see alive,

but who lay dead in the house, after being kept a fortnight, had undergone but little change. It was thought right to open her, and certainly nothing could be discovered except an extreme deficiency of blood. The external part of the body of both patients was exceedingly pale; but in the one who was opened I never certainly saw the membranes of the brain, especially the pia mater, more devoid of blood; and the brain itself was excessively exsanguous.

It is the same exactly with that extraordinary disease called catalepsy. I believe that catalepsy is a form of hysteria. You are aware that in that disease patients are generally sensible, though insensible to a very great extent: you may mould them into any form you please. If you raise the legs, they remain so; if you raise their arms, the same effect is produced; you may extend either leg, or do what you like with any moveable part of the body, and so it remains. This is a disease which very few have seen. I myself never saw a case of it; but it occurs, like hysteria, most frequently in women. Like hysteria, too, it will come on in paroxysms. There is another point, too, in which it agrees with hysteria; generally it is a trifling complaint, but sometimes it proves fatal. There was a case in this hospital last year which I did not see, from a paroxysm never happening when I was here, though it was in the house some weeks, and which was considered to be a case without any deception, of catalepsy in a female, in whom the paroxysms came on at irregular periods. She was pretty unconscious, and could be moulded to any shape. I believe she went out well, or at any rate no worse than she came in. There is a case of this kind, which occurred at this very hospital many years ago, described by Dr. Heberden, who came to the hospital on purpose to see it. You will find it in his *Commentaries*. It occurred in a female, and the paroxysms usually came on morning and evening, and lasted from one to three hours; but upon one occasion a paroxysm lasted twelve hours. It would come on suddenly; the pulse and breathing would be natural; the eye was fixed, as if looking at an object, and the arm would remain as it was placed for twenty minutes together; and it once did so for an hour, precisely as if it belonged to a statue, and it would sustain seven pounds weight. The jaws were shut; and it was observed that if the nostrils were closed, the lips opened, and a respiratory effort was made. After a time there was nearly, but not entirely, complete insensibility; and generally in hysteria the insensibility is incomplete. It was noticed that a slight winking occurred on the approach of the finger towards the eye, and a contraction of the iris took place on the approach of a candle.

Dr. Gregory, I recollect, used to mention a case of catalepsy that occurred from men-

tal distress in a lady whose history resembled the affecting tale of Isabella in the *Fatal Marriage*, and who appeared totally insensible except when her baby was brought near her, when faint signs of sensibility would instantly take place. In a case not exactly of catalepsy, but in some degree of analogous nervous affection — of trance — mentioned, I think, in the *Psychological Magazine*, a young lady lay so long senseless and without any sign of life, that she was not only laid out, but laid in her coffin; and at length, while they were placing the lid upon it, a general sweat from her person broke forth, and revealed that she was still alive. She recovered, and declared that she had been sensible to every thing around her all the while, though unable to move a feature, and had felt distracted when she found the coffin on the point of being closed upon her. What was the result of the case mentioned by Heberden, I do not know; but that catalepsy is sometimes fatal, is proved by one instance on record, though the examples of the disease altogether are not numerous. A deserter who was caught, suddenly shrieked, lost his voice, and became immovable and unconscious. He then became cataleptic, and he neither eat nor drank, nor discharged his urine nor feces, and died in twenty days.

I think it is important that you should know there are cases of this description, because hysteria and catalepsy are diseases for the most part totally devoid of danger; but now and then cases do occur which prove fatal. I never in my life, till within the last few months, knew a case of hysteria prove fatal; but within that period one case has occurred in my own practice, and another has been related to me, and the body examined in my presence. Catalepsy I never saw; and though most of the cases that have been related have not proved fatal, yet I have cited one, and I dare say a few more have destroyed life.

There is a case of hysteria now in Mary's ward, illustrating another form of the disease, and not accompanied by singing. Besides the regular attacks of hysteria, the right side of the body is much more affected than the left, so that in the fit the muscles of the right side of the face draw the muscles of the left towards them. You might imagine the patient was paralytic on the left side, whereas it is only the result of the violent hysterical spasms on the right. The right hand was clenched when the patient was admitted, and had been so for a fortnight before, with the thumb bent in upon the palm by the force of the spasm of the adductor pollicis: and the right arm, in the fit, is drawn behind, and the right foot drawn in. In this case, which you may now see in the hospital, the muscles of articulation are affected, so that the girl, who could speak very well before the disease

came on, now mispronounces a large number of letters and words: for "so," she says "toe;" for "yes," she says "yet;" and speaks just like a child before it has learned to articulate correctly. This is entirely the effect of the disease.

The mind, too, is frequently affected in hysteria; the patient becomes silly; and so it is particularly in this girl—though I ought rather to say woman, for she is twenty-five years of age. She answers abruptly and snappishly. She has had the disease for two years. Now in her there can be no doubt the disease has arisen from disappointed attachment. In her, I believe, there has been a little love. I understand she has a sweetheart, as most women have at or before the age of twenty-five; but that sweetheart is 200 miles off—a calamity quite sufficient to make any girl go into fits. She is, however, considerably better. I had her cupped on the loins to a pint, and I ordered her an injection every day, of three ounces of oil of turpentine in a pint of gruel; and she was also cupped again to a pint, but on the occiput. The fits have become much less frequent, much less violent in general than when she came in, and the menses have appeared, which, I may mention, had disappeared for three months; but it was not the cessation of these that caused the complaint, because that has existed three years, and the amenorrhœa only three months. Immediately after the first bleeding and the first injection the right hand opened completely, although it had been closed, as I said, for a fortnight before she came here. She will probably be soon cured.

I will take this opportunity of mentioning that formerly it was supposed that a great number of diseases arose from suppressed discharges and suppressed irritations. It seemed never to have been thought of that the occurrence of another disease might put a stop to one which previously existed, or put a stop to a natural discharge. But I think there can be no doubt that in very many cases, I might almost say the greatest number, of suspension of the catamenia, when another disease takes place, it is not the cessation that produces the other disease, but the occurrence of the other disease that causes the amenorrhœa. With respect to eruptive diseases, you know very well that it frequently happens that scarlet fever, or the measles, for example, will not come forth, or will decline too soon; and this state has been supposed always to indicate a defect of power in the constitution, and that stimuli should be given. I believe we owe to the French, and perhaps particularly to Broussais, the knowledge that when eruptive diseases do not come forth at their proper time, it is generally owing to internal inflammation, and certainly more frequently to inflammation in the chest, or within the ab-

domen, than to any thing else; and the best mode of bringing out the eruption is to subdue the internal inflammation. So it is with respect to a great many instances of the cessation of disease, or the cessation of a discharge, with another disease. A new excitement of the system takes place, and you must expect that that which previously existed in the body will not go on as vigorously as before. A chronic eruptive complaint may disappear, or the menses will cease, or a discharge from a sore leg may dry up. Certain it is, I think, that the occurrence of a new disease within the system is quite as frequently the cause of the cessation of various discharges, both morbid and natural, and the cessation of many diseases of irritation, as that the sudden suppression of a discharge, the sudden cessation of a disease and irritation which previously existed, gives rise to the new disease. This is certainly a very important point in pathology. If, in every case where menstruation has ceased and another disease has begun, we were merely to direct our attention to forcing back the menses, we should certainly very often fail; whereas, by attempting to cure the new disease which is set up, and by curing it, the catamenia will return of themselves, as a matter of course; though, while subduing the other disease, it might be good practice also to endeavour directly to excite them. You are aware that when an active, acute inflammatory disease takes place, the bowels, for example, will become torpid, and the natural secretions of the alimentary canal will cease, or become diminished very much, so that costiveness is a frequent concomitant of many acute diseases; and so it is precisely with the catamenia, and even discharges from issues and sore legs. You know that, when a person has a discharge from a sore leg, if inflammation of the lungs or the brain occur, the ulcer puts on a different appearance, and a stoppage of the discharge takes place; but there it is not the cessation of the discharge which causes the complaint,—it is the internal complaint which causes a cessation of the discharge.

These things were once but little known, and one side of the question only viewed by most old writers; consequently they took a too limited view of such cases, and were frequently wrong in their practice.

Disease of the Heart.

There was likewise a case presented, gentlemen, of an affection of the heart, which was exceedingly interesting, from the good that was done. A large number of diseases of the heart are undoubtedly of an inflammatory character; they begin as inflammations of the pericardium and the heart, and the organic affection which follows is

merely a consequence. But there are others of an opposite character, which are attended by debility of the whole constitution, with a flabbiness of the muscles, with paleness of the face, and are removed, or lessened, I would say, by an opposite mode of treatment. The case to which I allude was that of a woman admitted on the 13th January. She was 43 years of age, and was anasarcaous—the face and the legs were swelled. There was strong and quick action of the left ventricle of the heart over a considerable space, and at the moment you felt the stroke, and at the moment of the pulse, a bellows-sound was heard, which every now and then resembled the sound of a saw. It was generally blowing, like the sound of a pair of bellows, but every now and then it was shrill, like the sound of a fine saw. A dull sound was heard to a great extent, on striking over the region of the heart. She said she had been ill six weeks, but on further inquiry it appeared that in fact she had experienced palpitation of the heart four years. She was pale, and on feeling her arms I found that the muscles were quite flabby. My impression was, that if I bled this woman, if I put her on low diet, I should certainly increase the mischief that already existed. I could not but believe that this was a case of dropsy arising from disease of the heart, attended with debility and flabbiness of its texture. With respect to the state of the heart, I conceived that as it beat over a considerable space, and as there was a dull sound to an unusual extent upon percussion of the cardiac region, that it was dilated. If the heart be merely hypertrophied, and not dilated, you have not much extent of dull sound,—the natural dullness in the region of the heart is not much increased in extent; but if it be dilated, then you generally find the extent of dull sound on percussion considerable: this is the case whether it is dilated alone, or dilated as well as hypertrophied. There was evidently an obstruction to the course of the blood into the aorta; but it was impossible to say whether it arose from a disease of the valves, and a constriction of the mouth of the aorta, or the dilated state of the left ventricle. The latter might be quite sufficient to account for the symptoms, the cavity having become too large *relatively* for the natural dimensions of the opening of the aorta. I am quite satisfied that there was this dilatation of the heart, as well as a degree of thickening. The disease, however, was not of an inflammatory character; on the contrary, it arose from debility.

I gave her strengthening medicines. I exhibited steel; but I gave that preparation of it, on account of the dropsical effusion, which has a tendency to increase the discharge by the kidneys and by the bowels. She took the tartrate of iron—the *ferrum*

tartarizatum—in doses of two drachms three times a day. In three days she took three drachms three times a day; and in three days more, half an ounce three times a day. When I came to the latter quantity, she began to make a considerable quantity of water; indeed the water was increased more and more after the third day from her admission; but as I increased the quantity of the medicine, the quantity of the urine became very considerable; the bowels, too, became excessively purged, between the *ferrum tartarizatum* and the treacle—the vehicle in which it was taken: she was, according to her own account, excessively purged. While, however, she made this quantity of urine, and had this profuse discharge from the bowels, so far from being weakened, she regularly gained strength. The palpitation of the heart declined, the dyspnoea declined, the sound lessened from a sawing sound to only a bellows-sound; she could lie on the left side, after lying only on the right side at her admission; she became much stronger, and she likewise gained her colour. However, as the medicine was purging her too actively, it was reduced to two drachms three times a day; and as I was anxious that, although she should not be much purged, she should have the full benefit of the iron, I gave her, in addition, two drachms of subcarbonate of iron, which rather acts as an astringent, and she continued to take two drachms of each preparation of iron mixed in treacle, three times a day. The oedema went entirely away: on the 25th January (she was admitted on the 13th) she said she felt much stronger, and in all respects better. When she came in she was so ill that she could not walk; she was instantly put to bed, and I confess that I almost thought she would lie there till she died. On the 8th February the report is—She is quite strong, she feels quite well; she has no oedema in any part, no dyspnoea, no palpitation. But of course the heart was not cured. On listening I still found there was a bellows-sound, but there was such a mitigation of all the symptoms that she fancied herself well, found herself quite strong, and went about, and looked rosy, and would be treated as a sick woman no longer, but went home.

When dilatation of the heart arises merely from its texture having become soft and flabby, I have no doubt that it may sometimes be cured. Voluntary muscles, from being very relaxed, soft, and flabby, do every day become, by strengthening the system, firm and hard again. This, therefore, may happen in the case of the heart, and if the flabbiness has given rise to dilatation, (and dilatation is most frequently attended by softness of the heart, if not united with and resulting from hypertrophy,) this dilatation may cease, on the return of tone. Dr.

Piorry says, that by means of percussion on the plessimetre, he has ascertained the fact of a dilated heart recovering its natural dimensions.

The case was very satisfactory, because the treatment of disease of the heart is for the most part difficult. If you cannot discover tenderness, if you cannot make out decided local inflammation, or, at any rate, a fullness of the system, the utmost you can do in general is to palliate the symptoms, and to increase the quantity of urine, if any effusion have taken place. But, I believe, if there be reason to suppose great debility—if there be a flabbiness of the muscles, which is generally the case in such instances, paleness of the surface, and if the heart, too, is found dilated, and we see considerable effusion, under these circumstances a great deal of good may be done by giving preparations of iron. They are mentioned by some of the foreign writers, and I have myself seen a great deal of good done by them. Of all these preparations I consider that the tartrate is one of the best, on account of its having no tendency, when given in treacle, to constipate the bowels; on the contrary, to open them freely, and to keep up a discharge also from the kidneys. I think this one of the most satisfactory cases I have met with. A few years ago I should have been quite at a loss in such a case. I should perhaps have applied leeches, or given a certain quantity of mercury, or have given only diuretics; at any rate I should have palliated it only in a very imperfect manner, or perhaps done harm, and certainly omitted this important remedy.

Only four cases were admitted under my care last week; two in females. One was a case of chronic or rather acuto chronic bronchitis, which had existed two months, where there was sonorous rattle in various parts of the chest; but the other was a case of aneurism of the aorta.

Aneurism of the Aorta.

Aneurism of the aorta is a disease which we very seldom see in a woman; but I think you will agree with me that, although it is rare, the patient whom I will presently show you, really labours under the disease. Before she comes, I will read the account of the case.

Ann Baker, æt. 31, says she has been ill two years. The pulse is rapid, 136, full, and strong. There was a strong pulsation at the cartilages of the lower right true ribs, a constant cough, and some mucous expectoration; and last week she spit blood.—Where the pulsation is observed there is some tumefaction, and great tenderness; she has shooting pricking pains there, and she likewise has pain in the right shoulder down to the elbow.

This is a particularly well marked case of

the disease. Frequently when the aneurism arrives at a certain size, I think I have noticed pricking pains to take place. I presume they arise from the inflammation which is going on exteriorly to the artery, and producing the adhesion between the vessel and the neighbouring parts, or between the neighbouring parts themselves. It is excessively tender, of course, because an inflammatory process is going on all around the vessel, for the purpose of causing adhesion and glueing the parts together, that life may be preserved as long as possible. She has likewise an aching in the right shoulder. When an aneurism is on the right side, I have always observed pains in the right extremity—pains of the scapula—pains about the clavicle—pains about the axilla—and pain about the shoulder down to the arm; and here the pain extends as low as the elbow. With respect to the constant cough, there can be no doubt that it arises from the inflammation which is set up in the lungs immediately in contact with the aneurism. The lungs are agglutinated to the aneurism; the structure of the lungs suffers irritation, and she has therefore constant cough, and for the same reason mucous expectoration, occasionally tinged with blood; for a degree of bronchitis is established from the inflammation going on there. She has, I need not say, great dyspnoea on motion. The catamenia in her are quite regular, and at the time of her admission were present. She cannot lie on the left side, but lies on the right; and she lies better so than on the back.

I believe that this circumstance arises from two causes; first, if she lie on the left side, the aneurism, adhering as it does to all the parts around, drags towards the left side, and thus produces pain; and secondly, the heart beats more violently against the ribs. There is disease in her heart; the left ventricle thumps very violently; no doubt it is hypertrophied to a certain extent. The left ventricle beats with a strong impulse, and if it were much dilated also, there would be as much noise as natural; but it beats without noise, though with a violent blow. Such a blow against the ribs is quite sufficient, in general, to prevent a patient from lying on the left side. They lie upon the right, and withdraw the heart from the ribs as much as possible. With respect to the bronchitis, I may mention that there is sonorous rattle and cough, as well as expectoration. The chief seat of the pulsation is between the fourth and sixth ribs; and if you put your fingers in that situation, you there find it forcibly raised at every pulse.

I can have no doubt that the disease has arisen from violent exercise. Many diseases of the heart arise from inflammation, which begins with rheumatism; some again, of both heart and aorta, take place merely from an

inexplicable disposition to organic disease of the coats of the lining membrane, but sometimes you see disease of them from violent muscular exertion. This woman has lived what we must consider an unnatural life for a female; she has travelled with her husband over the country as a pedlar, and she says that she has walked frequently 18 or 20 miles in a day, and that in hilly countries. I need not say that a case of this kind must necessarily prove fatal; but great relief may be obtained—life may be prolonged very much by perfect rest, low diet, and repeated bleedings. I bled her to twenty ounces, and the next day I found the pulse reduced to 120; her breath was better, and she was altogether much easier, but she still had cough and great tenderness, and I therefore ordered another venesection to twenty ounces, and house physic. I have desired her to be brought in, because many gentlemen attend these lectures that may not attend the hospital practice, and it is a case that does not occur every day.

[The patient was here introduced to the class, and in answer to questions addressed to her by Dr. Elliotson she said, that she had sometimes walked twenty miles in a day, in a hilly country; she had spit blood on the Monday previous to coming into the hospital, but not since; she felt weaker since she was bled; she coughed a great deal in the night, but not so much as she formerly did in the day; her breath was a great deal easier; neither the pricking pain nor the tenderness was lessened; the pain in the shoulder, and down to the elbow, was very violent.]

This is another patient [presenting a large dried specimen, with ribs and spine], where you will observe an aneurismal sac exactly in the same situation.

I believe that, in this case, the aneurism must arise from that part of the aorta which has just left the pericardium. If the aneurism occur within the pericardium, it generally bursts before it has attained any considerable size. You are aware that, in the pericardium, there is nothing to form an adhesion around; the aneurism therefore simply extends, and after the external coat has been dilated to a certain extent, it gives way. The usual course of the complaint is necessarily for the internal and middle coats, one or both, to split, and the blood then becomes diffused under the external coat, which it distends to some amount, and the person will live for some weeks, or, for what I know, for some months; but at last, from the extension becoming greater and greater, the external coat gives way, effusion takes place into the pericardium, and the person dies as if shot.

The drawing which I now shew you (Pl. 3, fig. 1, in Dr. Elliotson's work on Diseases of the Heart) was taken from a patient of

mine in the hospital, who came in for some other complaint—pain in the head. Thirty leeches were being applied around the head, an hour or two after admission, when she suddenly fell back and died in a moment. Here is the upper part of the heart; here is the aorta arising from the heart, and you observe here the internal and middle coats of the artery, which have cracked transversely. The blood was effused under the external coat, and it at last burst into the pericardium. That this internal rupture had taken place a long time previously, was proved by the layers of fibrine—not coagulated blood, but *fibrine*, layer upon layer, which were discovered. The external coat was excessively distended, and at last a crack took place longitudinally, the very reverse of the direction of the crack in the internal and middle coats, and then the patient died immediately. It is a curious fact that the same thing occurred in George the Second. You will find it stated in an account of George the Second's death, in the Transactions of the Royal Society, that he died of rupture of the right ventricle of the heart; but it was found that the aorta was in the first stage of the state that is represented in this drawing of mine—that is to say, the internal and the middle coats were ruptured, and a coagulum of blood was found under the external coat, which had not given way. His heart had ruptured, but if that event had not taken place, he would have died in a few weeks, I presume, from rupture of the aorta itself. In this patient, therefore, it is not an aneurism of the aorta within the pericardium, but immediately after it has left the pericardium. I judge that it is so low from the situation of the pulsating tumor: the most prominent part is between the fourth and sixth ribs.

This disease sometimes takes place higher up—namely, at the arch; and then sometimes at the superior and sometimes at the anterior part of it. If the disease were seated in the arch itself, there would be a tumor formed much higher up—perhaps, indeed, above the sternum; but it must be seated rather lower down—not in the descending aorta, not in the arch itself—for the tumor to be in the situation in which you see it in this woman. This tumor will of course end in rupture: there is no appearance of the probability of death taking place from its pressure upon the œsophagus, or upon the trachea. Most probably, from the extreme tenderness which there is, it will give rise to rupture, and she will die of hæmorrhage. The rupture of an aneurism of the aorta most frequently takes place into the left pleura; but sometimes it takes place into the œsophagus, into the pulmonary artery, and into the substance of the lungs, and other various parts.

Now when the disease is not advanced as it is in this woman, I believe it to be very difficult indeed to recognize it. I do not pretend myself to be able to recognize an aneurism of the aorta before it has produced a tumor, or a strong pulsation at one part. There is a French writer who has written very ably on diseases of the heart—Dr. Bertin; who says that it is to be discovered by placing a stethoscope over the sternum. He says, that when the aorta is dilated by an aneurism, but so as not to give rise to any external tumor; nay, not so as to give rise to a pulsation that can be felt by the fingers, or perceived by the shocks of the stethoscope; you may *hear* it beat under the sternum more strongly than it ought, and that he has three times discovered the disease before he perceived any tumor, or any external pulsation at all. Whether he was only fortunate in these cases, or whether he was justified before hand in saying there was an aneurism of the aorta, I do not know. I have subsequently endeavoured to verify his observation, and suspected aneurism two or three times in consequence of the loud sound under the sternum, louder than that at the heart. But death has not yet verified my suspicions.

Respecting the symptoms, I believe what you have heard this woman say, and what I have pointed out from the case-book, fully agrees with what I have mentioned in my book upon Diseases of the Heart. "There is frequently cough, mucous and bloody expectoration; dysphagia; dyspnoea, even orthopnoea: attacks of spasmodic suffocation; pain in the right shoulder, axilla, inner side of the arm, in the course of the nerves, which may be tender, and up the right side of the neck and hand. Pricking pains may be felt in the tumor." These she experiences severely.—I had a patient labouring under this disease whose axilla was so tender from an aneurism of the aorta that he could not bear it pressed upon.

With respect to the situation of the tumor, I have said,—"When a certain size is attained by an aneurism of the ascending aorta, a tumor is usually found at the fifth and sixth ribs of the right side; when at the anterior part of the arch, the tumor is at the third and fourth of the right side; when at the superior part of the arch, it is above the sternum and clavicles. The strongly pulsating character of the tumor shows its nature, even should the tumefaction subside considerably for a time, as happened by repeated venesection in three cases of this disease that I treated, and in one of which the tumor once actually pointed." That was a case in which I expected rupture to take place within a week or two, but by repeatedly bleeding the man, although the tumor was not large, but began to be pointed, it receded so that the part became actually

flat. He died, however, suddenly, some six or eight months after, when he came to the hospital a second time, from rupture. But by lessening the volume of blood in the system, it became diminished, the tumor ceased, and although a strong pulsation still existed in the part, yet the pulsation was strikingly lessened, and I was, therefore, not surprised to hear a gentleman say, that the aneurism in this woman was lessened. She has lost forty ounces of blood, and I think it may have lessened, and by subsequent depletions it may lessen still more. I cannot say how long she may survive, but not more, I should think, than a few months; but of course there is no certainty in this. If the woman took violent exercise, she might die in a few days; but if she consent to be bled, to adhere to low diet, and to remain perfectly quiet, she may live a long time, that is to say, compared with the rapid issue that may take place if she follow a different course.

The other two patients admitted were men—one with acute peritonitis, the other with acute rheumatism.

ROYAL MATERNITY CHARITY.

To the Editor of the London Medical Gazette.

SIR,

I ENCLOSE a few particulars of the cases which occurred in the Eastern District of the Royal Maternity Charity during the last year. A similar statement appeared in the Medical Gazette for January 31st, 1829, and February 27th, 1830.

I am, sir,

Your obedient servant,

FRANCIS H. RAMSBOTHAM, M.D.

During the year 1830 there were delivered in the Eastern District of the Royal Maternity Charity, under the superintendence of Dr. F. H. Ramsbotham,

2221 WOMEN, of which Cases

- 26 were twins—about 1 in every 85½ cases; of these, in 15 cases both heads presented; in 9, the presentation was a head and a breech; in 1, both were breech; and in 1, a head and a shoulder.
- 1161 were males.
- 1086 were females.
- 2181 were presentations of some part of the head; of which
 - 8 were face presentations—about 1 in every 273 cases.
- 59 were presentations of the breech, or some part of the lower extremities—about 1 in every 39 cases.
- 7 were presentations of the shoulder, or some part of the upper extremities—

- about 1 in every 321 cases; of these, 1 was a second child of twins; 1 was terminated by the process called *spontaneous evolution*; and 1 was complicated, with an adherent placenta.
- 1 was an entire placental presentation.
- 1 was a partial placental presentation, in which, as well as in the entire placental presentation, it was necessary to deliver by *turning*, as the hæmorrhage did not abate on the membranes being ruptured.
- 7 were complicated, with *dangerous* hæmorrhage before delivery; not the consequence of placental presentations;—about 1 in every 317 cases. All these cases were delivered naturally, the hæmorrhage ceasing or greatly diminishing on the membranes being ruptured.
- 20 were complicated with an adherent, or retained placenta, requiring removal by the introduction of the hand into the uterus—about 1 in every 111 cases. One of these cases was after a shoulder presentation; and two of them were under twins.
- 11 were complicated with *dangerous* hæmorrhage after the natural expulsion of the placenta—about 1 in every 202 cases.
- 1 was delivered by craniotomy, under hydrocephalus.
- 4 were delivered by the forceps; two by the long—two by the short: about 1 in every 555 cases.
- 4 were complicated with puerperal convulsions; three before delivery—one after; about 1 in every 555 cases. One of the patients was delivered by *turning*; the other cases terminated naturally.
- 1 case of apoplexy occurred twenty-four hours after labour.
- In 2 premature labour was induced in consequence of narrow pelvis—about 1 in 1110. Both the children were born dead. For one of these patients I had induced labour prematurely three times before; the other I had delivered by means of the long forceps twice previously.
- 1 fœtus was acephalous.
- In 1 case there was what is termed a *secondary fœtus*.
- 14 women died—1 in every 158½ cases.
- 2168 children were born alive.
- 79 were born still—about 1 in every 28½ cases.
- sphacelus in the vagina, induced by the pressure of the head during labour.
- 2 died from pulmonary disease; one on the sixth day after delivery, from confirmed phthisis; the other a fortnight after delivery, from pneumonia, which commenced towards the close of gestation, was checked for a time, but returned with increased violence after the birth of the child. This woman had a narrow pelvis; she had had fourteen children: on one occasion craniotomy had been performed; premature labour had been induced five times,—four times by a gentleman now retired from practice, the last by my father and myself in February 1829. Her labours had all been difficult, except when brought on prematurely. On this occasion premature labour came on spontaneously, a few days before the time when I had determined to induce it artificially.
- 1 from a sudden eruption of blood on the ninth day after delivery, under a placental presentation. Every dangerous symptom had ceased; she appeared recovering favourably; I had discontinued my attendance, when I was summoned hastily, and on my arrival at the house I found her dead.
- 1 on the sixth day after delivery of twins. I did not see the patient till the day before she died; I was then told that the labour had been natural and easy, but a draining of blood had continued ever since: she was evidently sinking from the loss. On examining the body after death, I found a portion of the placenta attached to the uterus, nearly the size of the palm of the hand. Improper attempts to remove the placenta had evidently been made by the midwife.
- 1 from a ruptured uterus; it was her fourth child; all the children had been born naturally, though dead; her labours had all been lingering, owing to diminished space in the conjugate diameter of the brim of the pelvis. When I saw her first, the membranes had been ruptured fourteen hours; I left her for two hours, and during my absence the uterus ruptured itself. I immediately turned the child, but was obliged to perforate the head before I could extract it. The rent was transverse in the anterior part of the cervix uteri, and sufficiently large to admit the hand readily into the cavity of the abdomen, into which the whole of the child, except the head, had escaped.

Of the Deaths,

- 1 was on the fourth day after craniotomy had been performed, in consequence of the fatal head being hydrocephalic. She died from inflammation of the pelvis, and commencing

She appeared to rally for a few hours; but afterwards gradually sunk, and died on the fourth day after delivery.

1 on the fourth day after delivery by the long forceps: she was much exhausted when the operation was performed, and continued sinking till she died. Her pelvis was considerably smaller at the brim in its conjugate diameter than natural. This was her third child: under all her labours, I delivered her by the same instrument.

2 from peritonitis; one on the fourth day, the other a fortnight after delivery. Both labours were natural and easy.

4 from the effects of adherent placenta.

One on the tenth day after delivery, of irritative fever: it was a first child; the labour had been very lingering; the placenta was firmly adherent throughout its whole extent, and removed with great difficulty. The whole was brought away, and there was a very small quantity of blood lost.—One was on the ninth day: on the fourth day after delivery she was recovering well; she was afterwards suddenly taken ill, a neighbouring practitioner was sent for, and I did not hear of her again till I was informed of her death.—One on the sixteenth day: she sunk under constant and violent shivering fits, which continued from the third day after delivery till her death. There had been comparatively a small quantity of blood lost, but she was very much depressed by it.—The other on the third day, with symptoms exactly such as would be produced by an over-dose of opium. I had ordered her ten minims of laudanum every four hours, and as she had only taken three doses, I at first suspected that the medicine had not been properly prepared. On comparing the remainder, however, with another quantity made according to the same prescription, I could not detect the slightest difference in colour, taste, or smell. Her death may be accounted for in two ways; either the system was peculiarly susceptible of the influence of opium, or, what is more likely, the stupor proceeded from the excessive loss of blood she had sustained; as we sometimes see convulsions the consequence of violent hæmorrhage. The comatose state continued for 15 or 16 hours, and it was with the greatest difficulty she could be roused even to put out her tongue. I never before met with a similar case.

1 of irritative fever, 17 days after the

expulsion of putrid twins, at six months; one was expelled two days before the other. There was a slight hæmorrhage after the birth of the second. I removed the placenta, which were both partly in the vagina, partly retained in utero by the closing of the os uteri upon them. This constriction, and the smallness of the uterine cavity, prevented the introduction of my hand, but both placenta were extracted whole.

Of the Stillborn Children,

25 were premature.

9 were putrid at full time, or nearly so.

9 were breech presentations at full time, or nearly so.

4 were shoulder presentations.

1 was under a placental presentation.

1 was after the mother had suffered from accidental hæmorrhage before delivery.

3 were after the mothers had suffered from puerperal convulsions.

2 were delivered by the long forceps.

1 was hydrocephalic; delivered by craniotomy.

2 were after the induction of premature labour.

1 was under a ruptured uterus.

1 was acephalous.

With 6 the funis prolapsed by the side of the head, and could not be returned. In one of these cases the vagina was much constricted from sloughing after a former lingering labour; I was compelled to divide the stricture by a scalpel.

14 were at full time; head presenting; not putrid, nor delivered by art.

The number of deaths last year was greater than the average proportion in this charity; this may, perhaps, be accounted for in some degree by the prevalence of a puerperal epidemic of a very fatal character, which raged during the commencement of the year in the eastern and north eastern extremities and suburbs of the town. For, although not one of the patients of the Maternity Charity died of that specific disease, still during its continuance they appeared to suffer more than usual from accidental occurrences, which at other times would probably pass without producing any serious consequences. I particularly remarked that they did not recover so readily after hæmorrhage as I am accustomed to see them, and I suspect that the same condition of the atmosphere which favoured the spreading of the epidemic—without exactly inducing the prevalent disease—predisposed all puerperal women to various unhealthy actions on the application of any exciting cause.

THE LONDON MEDICAL GAZETTE,

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SATURDAY, MARCH 12, 1831.

LECTURES

ON

MEDICAL JURISPRUDENCE,

Delivered in the University of London,

By PROFESSOR AMOS.

ON THE LAWS RELATING TO THE BIRTH OF CHILDREN.

"Tenancy by the Courtesy,"—as affected by the Cæsarian Operation—and by Monsters—Anomalous Cases—Hermaphrodites—Order of Births—Infanticide—Concealment of the Birth—Abortion—Impotence and Sterility—Legitimacy—Douglas, Gardner, and Banbury Peerage Cases—Marriageable Period—Remark on the celebrated Warmingpan Story.

GENTLEMEN,—Having in my last lecture concluded the remarks which I had to offer on the principal rules of medical evidence, we may now proceed to consider the law as it applies to those cases and circumstances in which medical witnesses are principally engaged; and, in the first place, I shall beg leave to call your attention to certain points of law relating to the birth of children.

It is frequently of great importance in legal affairs to ascertain whether a child has been born alive, though it live but for a few seconds. I might put a number of instances of this, but one will suffice. A man marries a woman who is possessed of a landed estate; he has a still-born child, and his wife dies shortly after the delivery. The landed estate will go over to the remotest relation the wife has, nay, to the king, in preference to the husband. But if the child was *born alive*, and lived only a *second*, the estate would go to the husband for his life, who would be called a "tenant by the courtesy."

I put this instance of a tenancy by the courtesy only by way of illustration; for I could put many other instances, where the living but for an instant is important with a view to legal consequences; but my only object is to impress on the mind of the medical prac-

titioner the necessity of paying particular attention to cases *where children die soon after birth*. As I have selected the instance of a tenant by the courtesy, I will follow it up by mentioning one or two medico-legal points connected with this particular legal estate.

For a considerable time it was the opinion of the profession, that, to create a tenancy by the courtesy, the child must be heard to cry. Our great oracle of law, Lord Coke, dissented from that opinion; but upon a ground of which I do not know whether medical men will approve, viz. that the child may be *deaf and dumb*. It is probable, however, that the *crying* of the child would be regarded by a jury as conclusive evidence of the child being born alive. Again, it is the law, that a tenancy by the courtesy will not be created, where the child is "ripped from the womb" by the *Cæsarian operation*, after the death of the mother, because it is not born *during* the marriage. Here is a strong inducement as far as interest, not feeling, is concerned, on the part of the husband, to have the operation performed before the death of the mother. And in case the mother expire under the operation, or if it be performed with great haste after the supposed death of the mother, here is a question of fact, attended with important legal consequences, as to whether the mother survived the birth of the child but for an instant. This is a legal point which may stimulate your medical inquiries with respect to the history of the *Cæsarian operation*.

Again, the birth of a *monster* does not create a tenancy by the courtesy. Some writers on medical jurisprudence pass over the subject of "monsters" by saying, it is *unimportant* to make particular inquiries concerning monsters, *because they seldom live long*; whereas, from what has been just said, you see the importance, as regards a tenancy by the courtesy, of the point, where a child has lived a *minute*, of ascertaining whether it were, or were not, a monstrous birth.

I have been taking the tenancy by the courtesy only as one example out of many to

which to attach my observations; we will take another example, for variety:—Suppose a man had a daughter by one wife, and a daughter by a second wife, and died; and there happens a posthumous birth. If the posthumous child is a son, and it lives for a second, the consequence would be to disinherit the eldest sister entirely, and give all the estate to the youngest; for the eldest sister is not heir to the brother, being of half-blood. But if the posthumous birth was of a *monster*, then the two sisters would inherit equally. This is what the law calls a “*possessio fratris*,” and many other examples of the importance of these inquiries, in a medico-legal point of view, might be stated.

A word or two more on the subject of *monsters*: our law is, in a great measure, the creature of emergencies. We are a practical people, and have dealt very little in prospective legislation. The subject of *monsters* affords an example of this. I will read you the legal definition of a monster:—

“A monster, which hath not the shape of mankind, cannot be heir, or inherit any land, albeit it be brought forth within marriage; but although he hath deformity in any part of his body, yet if he hath human shape he may be heir. *Hi qui contra formam humani generis converso more procreantur, ut si mulier monstrum vel prodigiosum enixa, inter liberos non computatur. Partus tamen cui natura aliquantum ampliaverit vel diminuerit, non tamen superabundanter (ut si sex digitos vel nisi quatuor habuerit) bene debet inter liberos connumerari. Si inutilia natura reddidit, ut si membra tortuosa habuerit, non tamen est partus monstruosus.* Another saith, *ampliatio seu diminutio membrorum non nocet* *.”

You will ask, how does the law provide for the case of the Siamese youths, their rights in regard to third parties and to each other?—and how for a person whose face may be inhuman, but may possess reason—say the case, real or supposed, of the pig-faced lady? and, probably, medical men may put a number of other instances;—I answer, that the law says nothing more than what I have just read; and that, therefore, if a case of monstrous birth should be brought before the courts, the courts will seek for all the medical information that can be obtained, and will legislate for the particular occasion; only they will not call it legislation, but will pretend to found their decision upon Lord Coke's definition; which definition, by the way, is borrowed from Bracton, who borrowed it from the civil law.

There is another species of birth, of which the law speaks in terms as vague and rude as upon the subject of *monsters*—I mean *hermaphrodites*.

“An hermaphrodite (which is also called

androgynus) shall be heir, either as male or female, according to that kind of the sexe which doth prevail. *Hermaphrodita tam masculo quam femine comparatur, secundum prevalescentiam sexus inealescentis.* And accordingly it ought to be baptized *.”

A committee of medical men and lawyers would give us some more distinct and scientific rules upon the subject of hermaphrodites, as well as upon *monsters*; but, in the present infantine state of our jurisprudence as to these matters, it is the more incumbent on the medical practitioner to note every minute fact, with regard to births of doubtful sex, particularly when you reflect on the misrepresentations which ignorant or interested persons may make on such a subject; and to which such malformations, as are every now and then occurring, may give a colour.

We have been considering the *nature* of particular births; I should mention that the *order* of births is also a most material circumstance to attend to, when two or three children are born at a time. The following case has occurred in our courts:—There was a family of eight children, of which the three youngest were born at one time, and the five eldest died—the priority of birth of the three youngest was questioned in a suit brought for the inheritance. The names of the children were Stephanus, Fortunatus, and Achaicus, three names which are to be found in this order at the conclusion of St. Paul's Epistle to the Corinthians; and evidence was given of the declarations of the dead father, that this was the order of their births; but this evidence was outweighed, in the opinion of the jury, by the evidence of a declaration of a deceased aunt, who was present at the birth, and who used to say, that she tied a string round the arm of Stephanus immediately after he was born, in order to denote that he was the second son.

I should mention that declarations of *relatives*, but not of acquaintances, or servants, are admissible in matters of pedigree; and this is an exception to the general rule, which excludes hearsay evidence. As for parish registers, they are no evidence whatever of the time or place of birth; they only prove the time and place of baptism.

It is now time that I should proceed to speak of a subject which is of primary importance in the study of medical jurisprudence—*infanticide*.

By a statute in the reign of James (21st Jac. I. c. 27), concealment of the birth of a bastard child was made conclusive evidence of child-murder, unless the woman could prove that the child was born dead. This harsh provision continued until 43d Geo. III. c. 58, which allowed the jury, upon a charge of child-murder, to find that the prisoner had

* Coke Littleton, 7 b. 8. a. and 29 b.

* Co. Lit. ibid.

concealed the child; but the grand jury were placed in this unpleasant situation: in order to punish for the concealment, a bill must have been found for the murder, and the woman must have been tried for the murder. By a recent act, Lord Lansdowne's, (9th Geo. IV. c. 31,) the woman may be proceeded against for the concealment simply.

If you are called in upon an occasion of child-murder, you had need prepare yourself before you go into the witness-box. You will first, probably, be asked, whether you have made all the experiments which you find in medical books as indicating the fact of the child being born alive or not? for example, the hydrostatic test of the lungs, the weight of the child, and other tests which my colleague will point out. You will be expected, also, to have made such accurate observations as not only to state how, in your opinion, the death was occasioned, supposing the child born alive, but also to answer many ingenious hypotheses, as to every means by which the death of a new-born child might be occasioned. With this view you should consider, before you go into the witness-box, whether the navel-string might in any, of various ways, be the occasion of the death—whether suffocation might not have been occasioned by the discharge of blood from the mother; or by wet linen lying over the child, collapsing and excluding the air; or by linen being drawn close to the mouth and nose of the infant, by the suction of breathing, &c. In short, a medical man may find his credit with the public materially affected by the answers which he gives in the witness-box—by his having studied or not, not only the particular case, but the circumstances attending *every* mode in which the death of newly-born infants may be caused. You will be expected, also, to be acquainted with the history and present state of medical opinion upon such subjects: Dr. Hunter's tract, especially, "On the uncertainty of the signs of murder, in the case of bastard children," you will be sure to be asked about. And as you look particularly to the circumstance of the child being born alive; and, 2dly, supposing it born alive, you consider whether its death was the result of natural causes, of wilful violence, of negligence or abandonment, so you should, 3dly, have a particular regard to the state of the mother, whether, for example, the act may not have been done under the influence of puerperal mania. A remarkable instance of this kind is related in Sir M. Hale's Pleas of the Crown:—

"In the year 1688, at Aylesbury, a married woman of good reputation being delivered of a child, and not having slept many nights, fell into a temporary phrenzy, and killed her infant, in the absence of any company: but company coming in, she told them she had killed her infant, and *there it*

lay. She was brought to jail presently, and after some sleep, she recovered her understanding, but marvelled how or why she came thither. She was indicted for murder, and upon her trial, the whole matter appearing, it was left to the jury with this direction, that if it did appear that she had any use of reason when she did it, they were to find her guilty; but if they found her under a phrenzy, though by reason of her late delivery and want of sleep, they should acquit her: that had there been any occasion to move her to this act, as to hide her shame, which is ordinarily the case of such as are delivered of bastard children, and destroy them, or if there had been jealousy of the husband that the child had been none of his; or if she had hid the infant, or denied the fact, these had been evidences that the phrenzy was counterfeit; but none of these appearing, and the honesty and virtuous deportment of the woman in her health being known to the jury, and many circumstances of insanity appearing, the jury found her not guilty, to the satisfaction of all that heard it*."

Let me add, also, that in cases of this description you will find the woman frequently in a state of despair—deserted by the father of the child—and all the people about her, indulging in that passion which is so congenial to the vulgar mind on the supposed detection of a horrid crime. Let me conjure you then, under such circumstances, not merely to give the medical facts of the case attentive consideration, but to attend to such collateral circumstances, though not of a medical nature, as may be of importance to the accused on a trial for child-murder; as without money or friends, these circumstances, if it were not for some intelligent and humane person, might never transpire. Inquire, then, particularly as to every circumstance which goes to shew that the woman made any provision for the child—as by preparing clothes, or other means. One woman I remember to have read of, who was saved by the circumstance of her having hired a lodging for the purpose of lying in, and informing the woman who kept the lodging for what purpose she wanted it. Again, it should be inquired *what facility has existed for concealing the child*. In one case, a woman being surprised by a solitary delivery, put the child in a night-chair, and after several days, pointed out the cause of the smell which was noticed in the room; and here it went very far to acquit the prisoner, that she had possessed many opportunities for a more complete concealment of the child.

You will probably find the persons about the woman persuading her to make a confession: this you should discountenance, and should put the woman upon her guard, by

* 1 Hale, Pl. Cr. p. 36.

telling her that what she says may be afterwards used against her.

I have hitherto spoken of the birth of children, but the English law has particular reference to the state of children in the womb, especially with regard to the crime of administering drugs, or using instruments, in order to procure *abortion*. This was not considered a capital offence till the statute 43 G. 3, c. 58, which, indeed, was the first statute ever passed upon the subject of abortion. This statute makes a distinction between women being quick and not quick with child, a distinction which I leave to the consideration of medical men, some of whom have denied the propriety of it. The word "quick" has been defined a little more precisely by a decision than it is by the statute itself; and it has been held in *R. v. Phillips*, 3 C. 74, that a woman was not to be considered as *quick with child*, within the meaning of the statute, when she swore that she had not *felt the child alive* within her. This statute was objected to on account of the medical ignorance which it was supposed to exhibit, as to the likely means to procure abortion, not making it an offence to use instruments for this purpose when the woman was quick with child, but only if she was not quick, in which case the using of instruments became unlawful. The defect, however, is rectified by Lord Lansdowne's recent enactment*.

It would seem upon the construction of this act, as it has been held in the construction of the former act, that in the indictment for the charge which is not capital, it will be an answer to the charge, that the woman was *not pregnant*—though it was formerly thought otherwise by the profession. But it would seem, that in a prosecution, whether for the capital or the minor offence, it is not necessary to prove that a drug was calculated to procure abortion, provided it was administered with that intent; though where the prosecution is for the capital charge, it must be proved that the drug administered was a poison, or of a noxious and destructive nature. The consent of the woman does not excuse either the capital or minor offence. In one case a prisoner was acquitted upon the ground that the jury believed that he had given the young woman an innocent draught, in order to prevent her destroying herself, which she threatened to do, unless enabled to conceal her shame.

I cannot avoid saying a few words respecting the capacity of procreating children. Questions upon this subject usually arise in the ecclesiastical courts, with reference to divorces, though they sometimes occur in the common law courts, in the shape of inquiries respecting legitimacy. A marriage may be avoided on the ground of impotency and sterility, but a marriage by a person subject

to such a corporal infirmity, is voidable only, and not void; the marriage is esteemed valid to all civil purposes until sentence of separation is passed, and such a sentence can only be passed during the lives of both the parties. In many, at least of the States of America, marriages are not avoidable for impotency, and the French code is silent upon the subject. I believe French lawyers are at variance whether divorces for this cause are consonant or not to the spirit of their code.

The proper trial of the incapacity of the woman is by a jury of matrons; and the incapacity of the man is generally tried by inspectors, appointed by the court and duly sworn—generally two surgeons and two physicians, and this mode of examination has frequently been substituted for the jury of matrons, in cases of the incapacity of women.

Much has been said in our history, and something in our law-books, respecting relative impotency—impotency with regard to a particular woman—or, as it is technically termed, "*versus hanc*;" and various points have been discussed by writers on ecclesiastical law, upon supposed cases where a man has been divorced for impotency, and has married again, and had children.

The question of impotency, "*versus hanc*," has excited greater attention than, perhaps, it otherwise should, on account of the celebrated divorce of the Lord and Lady Essex, in the reign of James I., in the proceedings of which the king took such an active and disreputable part, his object being to gratify his favourite Somerset by a marriage with the same Lady Essex as soon as she should obtain the divorce. This ill-starred marriage led to consequences which stained the reign of James with the darkest of crimes, and occasioned some of the most extraordinary judicial proceedings on record*.

I shall now, gentlemen, beg leave to direct your attention to certain medico-legal circumstances relating to *legitimæ* birth.

There is an ancient, but somewhat barbarous mode of proceeding in this country for the protection of presumptive heirs, as daughters or more remote relations, against suppositions children which widows may endeavour to set up. I allude to the form prescribed in the writ, called "*de ventre inspiciendo*," which is still in force upon this subject†. It was revived not a great

* See Howell's State Trials, v. ii. p. col. 862, &c.

† The ancient writ, directed to the Sheriff, ran in this way:—"Quod assumptis tecum discretis et legalibus militibus et discretis et legalibus mulieribus de Comitatu tuo, in propria persona accedat ad ipsum —, et ipsam a predictis mulieribus coram prefatis militibus videri facias et diligenter tractari per ubera et per centrem, et inquisitionem factam certificari facias sub sigillo tuo," &c. It seems to have been first issued in the reign of Henry III.

* See Russell on Crimes, Addenda, p. xxxvi.

many years ago. I will read you some of the circumstances of the case.—[The case here referred to by the professor was that of Sir John Chaplyn, who died, leaving a widow of suspected purity; his three sisters, who were his heirs at law in case of no issue from the widow's alleged pregnancy, petitioned the Lord Chancellor (King, in the year 1731,) for a writ *de ventre inspiciendo*. It was granted with certain conditions.—See 2 P. Williams, Rep. 591.)

The Douglas Peerage case was a case in which the charge against the successful claimant was, that Sir John and Lady Douglas, from whom he claimed his descent, had obtained, in France, two children, whom they wished to pass off as their own children, but who, it was alleged, were the children of two individuals of the name of Mignon and Sanry. The following observations of Lord Mansfield in that case, upon the subject of "family likeness," will perhaps be considered as of a medico-legal nature. "I have always considered *likeness* as an argument of a child's being the son of a parent, and the rather as the distinction between individuals in the human species is more discernable than in other animals: a man may survey ten thousand people before he sees two faces perfectly alike; and in an army of an hundred thousand men every one may be known from another. If there should be a likeness of features, there may be a discriminancy of voice, a difference in the gesture, the smile, and various other things; whereas a family likeness runs generally through all these, for in every thing there is a resemblance—as of features, size, attitude, and action *."

The law of legitimacy has recently undergone much consideration by our judicial authorities, in consequence of the claim to the Gardner Peerage. The result of the Gardner Peerage case was to establish that Henry Fenton Gardner, claiming to be Lord Gardner, was illegitimate.

The evidence to prove the legitimacy consisted of two parts:—

1. Evidence of facts to shew that Henry Fenton Gardner was the fruit of adulterous intercourse between Mr. Jadis and Lady Gardner.

2. Evidence to shew that the period of gestation was such as to render it improbable, if not impossible, for Captain Gardner to have been the father of the child.

As to the latter of these two points, the period of gestation, it was proved that Mrs. Gardner parted from her husband, on board his ship, 30th Jan. 1802; that the ship then sailed for the West Indies; and that Captain Gardner and Mrs. Gardner never met again till the 11th of July. The child was born on the 8th of December, in the middle of

the eleventh month after Captain and Mrs. Gardner parted from each other—or more exactly, 311 days—that is, 4 weeks, and 3 days, beyond 40 weeks.

A great body of medical evidence was examined respecting the natural period of gestation; and it was agreed by the witnesses on both sides, that the extreme of the usual period of gestation was 280 days, though a few exceptions were spoken to, particularly by Dr. Granville, who spoke of his own wife having been with child for 313 days.

Children have been adjudged in England legitimate when born 40 weeks and 10 days—40 weeks and 11 days after the death of the husband. There appears to be no definite period fixed by our law. The code Napoleon withholds the presumption in favour of legitimacy when the child is born 300 days after the dissolution of a marriage. The Frederician code of Prussia, without expressly declaring children born in the 11th month illegitimate, attaches many additional conditions to the proof of legitimacy in such a case. By the Scotch law and the civil law it seems to be treated as a conclusive proof of illegitimacy, where a child is born after the 10th month—300 days.

But the Gardner Peerage case was not decided solely upon the point of protracted gestation. This point raised an *improbability* of the child being legitimate, and this improbability was greatly heightened by other circumstances. (Here the learned professor read some passages from Le Marchant's book; see p. 10—13.)

In the Banbury Peerage case no question arose upon the period of gestation; but Lord and Lady Banbury had been married twenty-one years without having had children. Lord Banbury was much advanced in years. He conveyed away family estates, and made a will without mentioning any issue. The mother, Lady Banbury, married Lord Vaux, the supposed adulterer, immediately after Lord Banbury's death; and the child, under whom the claim was derived, though born of Lady Banbury during the wedlock of her and Lord Banbury, went by the name of Vaux during Lord Banbury's life. These, with several other circumstances, almost equally strong, were relied upon as proof of illegitimacy.

Sir S. Romilly makes some observations, which I will read to you, upon the subject of Lord Banbury's age, which was 80. "The objection," says the learned Counsel, "to the age of Lord Banbury, may at once be dismissed. The law of England admits of no age at which a man may not be a father, and many medical authorities may be cited to shew that this rule is founded on reason. Dr. Gregory, of Edinburgh, whose name must be familiar to all admirers of science, says upon this subject, "*Magna autem de his rebus differentia; decantantur*

* Collect. Jurid. 2, 402.

enim exempla senum in castris veneris strenue merentium, postquam centum annos compleverant; neque sane dubium aut adeo rarum octogenarium patrem fieri." Haller likewise pronounces a man of ninety to be capable of precreating. Parr became a father in his 140th year. In short, the liberality of the law on this subject is excessive, for there is no age, from seven upwards, at which a man is denied the privilege of having children*."

There is no doubt, however, that the circumstance of advanced age might, by law, be entitled to just so much weight in the scale of probability as the reading and observation of a person conversant with the facts of medical jurisprudence would attach to it. All that the law has said upon the subject is, that where a man and his wife have an estate to them and the issue of the marriage, it shall never be cut down to an estate for life, and be made subject to the restrictions on a tenant for life, merely on account of the age of the man or his wife, or both of them; as would be the case if one of them was to die without issue: for, in that case, the survivor would be only tenant for life; though a tenant of life having peculiar rights, and called tenant in tail after possibility of issue extinct. The law is silent upon the subject of the presumption of want of power to beget children arising from age. It is properly a presumption of fact, and not of law.

There would not have been any ground for dwelling upon the Banbury Peerage case, except for a rule of law which had sway for centuries in this country, but which the Banbury and Gardner cases have chiefly contributed to annul—viz. that if a child was born during marriage, in England, the father being within the four seas, and no physical impossibility being proved, the child *must* be legitimate. This was called the rule of the *quatuor maria*.

It is settled by these decisions in the Gardner and Banbury Peerage cases, that, in questions of legitimacy, you may enter into every species of moral evidence and physical *improbabilities*, and that you are not confined to physical *impossibilities*. An Edinburgh reviewer finds fault with me that I do not, in my edition of Phillippon Evidence, lay down a restriction, that, in cases not of physical *impossibility*, non-recognition of the parent is indispensable to the proof of illegitimacy. I have discussed this point in the law-lecture room, but as it is of a legal, and not medico-legal nature, a discussion of it would be out of place here.

I have to mention in addition, upon the subject of legitimacy, that Lord Coke lays it down, that if a widow marries again, and has a child within nine months, the child

may choose its father. But it appears to be the general opinion of the legal profession in the present day, that this question would be left to the jury upon the medical and other probabilities attending the case.

I have adverted to the *advanced* age of parties, as affording a scope to medical evidence upon the subject of legitimacy. The same may be observed of the tender years of a husband or wife. By the law of England, there is no period too early for marriage: infant females have been held entitled to dower at the early age of nine years. The only limitation is, that males may dissent to a previous marriage when they are at the age of fourteen, and females at twelve; but a marriage after they attain these ages is irrevocable; and a marriage is good for all purposes if made within these ages, if not dissented from at the time of the male party attaining fourteen and the female twelve. Such early marriages were very common formerly, but are rare now; though an instance was mentioned to me the other day, of a female child being married at the age of twelve. The person who mentioned this to me, told me that he recollected the female being obliged to change her ring when she grew up, as being too small for her. In the case of such early marriages, you will easily see that medico-legal questions of legitimacy may easily arise. Suppose the husband thirteen—the wife, say nineteen, or twenty. The wife has a child: what would the medical man say of the physical possibility of the child being legitimate? What evidence would he give as to the probabilities of the case? This is an instance in which the medical man would make a more creditable figure in the witness-box from having reflected on the general rules which my colleague has stated, or will state to you, and on the remarkable exceptions that have occurred to those rules; and which he will, no doubt, bring under your notice. There are cases in our law-books, of children, born during marriage, being held illegitimate because the father was three years old—six, seven, eight, nine, and fourteen.

Before concluding the subject of legitimacy, I ought not to omit some allusion to Bishop Burnet's warming-pan story; connected as it is with the disputed legitimacy of the Pretender. (Here Mr. Amos read some passages from Burnet's *Own Times*, 3, 239.)

This story, as related by the Bishop, it may be observed, though it carries gross improbability on the face of it, is supposed to have made more converts to the cause of the Revolution than the most powerful arguments of Somers, or the profoundest reflections of Locke; and were not fraud to be always not only discountenanced but eschewed, however pious the object of it, we might almost pardon the successful attempt

* Le Marchant's Reports, &c. Appendix, 418.

of encountering a prejudice so absurd as divine right, by a weapon so ignominious as a warming-pan.

ON THE
ACTION OF THE ABSORBENTS.

To the Editor of the London Medical Gazette.

SIR,

WITH this I send you a paper on a physiological subject, which is quite at your service; and if you think it deserving, I shall feel obliged by your giving it a place in your Journal.

I am, sir,

Your obliged and constant reader,
GROVE BERRY.

Hackney, 1st March, 1831.

There is, perhaps, no department of the animal economy about which we have so little anatomical knowledge to assist us in explaining the phenomena of its action, as we have of the absorbent system. The minuteness of its vessels is such as almost to elude the most eagle eye; but having discovered all we can respecting their course and relations, even the microscope fails us when we attempt to investigate their structure, a knowledge of which is essential to a satisfactory rationale of the mode of performance of any operation.

I have bestowed a good deal of consideration on this subject of late, and I am induced to believe that the mode of action which has been hitherto ascribed to these vessels, is erroneous; because the various phenomena which present themselves as effects of their action, do not seem explicable by it. I believe no one has gone beyond supposition in most of the explanations which have been given of it; theories, therefore, which are formed without having anatomy for their basis, must ever be offered with the greatest diffidence. Still as theory is, in this case, as yet the only ground on which to build our ideas of their action, one is emboldened to offer another, although diametrically opposite. Our *dernier resort* is to reason from analogy; at the same time availing ourselves to the utmost of any thing cognizable in reference to it, which is the result either of disease or of the common and healthy processes.

It does not occur to me that any change would be made in the *mode* of treatment of disease, if the ideas I have here promulgated were allowed; but at least a different explanation must be given of the manner in which remedies produce their effects. This, in a practical sense, would make it a matter of no moment; but in a physiological point of view, inasmuch as its object is the elucidation of what has been hitherto obscure, and it proposes to explain in a plausible manner, the *modus operandi* of a most important function in the animal as well as vegetable economy, it ought not, though a mere theory, to be discarded at once without examination.

I have endeavoured to support my ideas by a detail of facts which must be, for the most part, familiar to every observer; and to me there appears to be a want of congruity between the effects, the agents, and the generally conceived notions of their mode of acting. If this one idea (novel as I believe it is, and startling as it may be) induce abler heads than my own to examine into the merits of my speculation, I have no doubt much matter will be elicited which, I hope, will not retard the progress of science.

My thoughts were first directed to this subject by a remark which I heard Mr. Scott make at the Eye Infirmary—"that we have no right to suppose that any medicine has the power of stimulating the absorbents to action."

In cases of iritis, when pus is secreted, I have heard Mr. Lawrence order mercury (at Bartholomew's), with the view of "exciting the action of the absorbents;" and I recollect well hearing him say, that he "knew of no medicine which had so much power of promoting absorption;" and I believe this is the view which has hitherto been generally taken of its mode of acting. But I see in a certain review of Mr. L.'s recent work on Venereal Ophthalmia, the following passage, quoted from the work, with the reviewer's comments upon it. The writer says, "the removal of effused lymph from the iris, under the action of mercury, has generally been attributed to increased activity of the absorbents. Mr. L. thinks 'that it has no such direct operation; and that the removal of the deposition takes place in consequence of the inflammation, to which it owes its origin, being arrested.'

This cannot, however, always be the case," continues the reviewer, "for morbid depositions in the eye, as well as in other parts of the body, have disappeared, under the use of mercury, some time after the inflammation which had produced them had entirely ceased."

Admitting that the inflammation had ceased (as the reviewer asserts, but which is quite an assumption), yet there must have been a certain kind or degree of action still going on, to preserve the existence of this morbid deposit. The *increase* in the degree of inflammation may have been arrested by a variety of causes, just at the point where the ordinary degree of absorption in the part shall be tantamount to the degree of action; and thus, in reference to the bulk of the deposit, the one will neutralize the effects of the other, and yet it is not necessarily more than the common degree of absorption. The action of mercury, just at this crisis (which may continue for a long time), being superadded, puts a stop to, or modifies, the process of secretion, which gives absorption the advantage.

Such an explanation appears to me to be necessary; for if the absorbents only were affected, they might work away for ever, and remove all the morbid secretion; but the diseased action continuing, fresh matter would be presented to them *ad infinitum*. It must be the formative process which is superseded, or modified.

There is one circumstance I have certainly constantly remarked—that patients, soon after a moderate salivation, invariably, more or less, get fat, or at least more filled out, puffy, bloated as it were; apparently from the effusion of serum into the cellular substance, in consequence of the debilitated state of the arteries which the mercury has induced: this could hardly be the case if the ordinary action of the absorbents were increased.

In substance, I heard Mr. Scott make the following remark last winter:—"In a case of incipient *melanosis*, which formed a tumor from the conjunctiva palpebrarum, I gave iodine with considerable benefit. I cannot tell how it acts, but I know of nothing so effectual in correcting or suspending diseased action. Swellings of the absorbent glands, which are especially observable in those of the neck, usually yield to iodine; but I believe they are dimi-

nished, not by an increased action of the absorbents, but by a diminution or modification of the morbid arterial action."

Absorption and secretion are always going on in the same ratio in a healthy person, so that the bulk of the part always bears the same relative proportion to the whole. We have a mass of evidence to prove that this balance is subverted by causes which affect the arteries—agents, external and mental; but, I conceive, none that the absorbents are similarly affected. Now all the changes which take place may be explained by the state of the capillary arteries: there is, therefore, no occasion to imagine that we reduce a tumor by *exciting a greater degree of absorption*; say, rather, that we *diminish* or *modify* diseased or increased action, and the same degree of absorption is sufficient to effect the reduction of the tumor.

The process of absorption, both in the animal and vegetable kingdoms, is much more easily explained by, and more referrible to, the laws of hydrostatics, than any of the other vital processes. It is in the nature of things that a capillary tube shall absorb; at least it is so while the vessel is not acted upon. The capillary arteries cannot absorb, because of the *vis-a-tergo* of the heart's action; but with what avidity is the blood absorbed by the capillary veins (although it is going from a larger into a smaller space) where it is acted upon, not only by the capillary form of the vessel, but by the exhausting power of the right auricle also!

Regarding the extreme minuteness of these vessels, the absence of a *vis-a-tergo*, &c. we cannot expect much variation in their degree or mode of action. The absorbent system is comparatively so remote from the sanguiferous system, that the same causes which affect the one can hardly operate on the other; at any rate the state of the circulation cannot alter the state and action of the absorbents, as far as these vessels themselves are concerned: it may occasion a variation in the quantity of matter absorbed, because the veins have been also proved to absorb; but to them, of course, I do not refer. In short, I believe the process of absorption to be carried on, as it were, "in spite of itself:" supposing the vessels to be in existence, and with the relations which

they now hold, it is impossible that any other process than absorption can be carried on by them. If, however, they be subject to the nervous influence, their mere variation in size alone may alter the quality as well as quantity of matter absorbed.

The following is Bichat's description of them:—"It is impossible to determine how they arise, or to ascertain the structure by which they are distinguishable. In their origin, communications, &c. they must certainly differ essentially in the mucous, cutaneous, serous, synovial, cellular, and medullary *surfaces* to which they belong. The nutritive exhalents must also differ materially from the others; but nothing can be elucidated by inspection. They have an external coat from the cellular tissue and the internal membrane, which forms the tissue peculiar to them: in some of them this is continuous with that of the veins, forming with them an uninterrupted continuation of tubes. Their valves are double, rarely single, and much more numerous than those of the veins." Again:

"There are no fleshy fibres even in the thoracic duct. It is probable that the parietes of these vessels are overrun with blood-vessels, for, in common injections, they are frequently evident over the thoracic; but it is not known whether they have nerves. If we judge by analogy with the veins, to the structure of which they bear a striking resemblance, they must be very obscure, admitting that they do exist." He has "never traced nerves." In another part he says, "the contractility of the tissue is evident, because the vessels contract the moment they are emptied. They do not appear to possess relative sensibility; but the attempt to prove it is attended with the greatest difficulty." He lays particular stress on their "great variation in form and capacity," and their "retaining, after death, the last shape and size they had during life; and that, when alive, they are constantly changing."

"Neither the absorbents nor their glands are possessed of *animal sensibility*. *Sensible organic contractility* is, at least, doubtful in this system; or, if it exist, it is very obscure, and at the utmost can only be compared to that of the dartos."

In another part he says, "there is one circumstance, however, in which

the absorbents are keenly sensible—viz. their inflammations. An obstruction, and even a very striking redness along the course of the subcutaneous absorbents, terminating at all the inguinal glands, or even exceeding them, producing the most acute pain, is a phenomenon frequently observed in diseases."

"All animal tissues," says he, elsewhere, "are susceptible of sudden contraction, excepting the hair, epidermis, and nails, which have only the rudiments of this faculty*."

Such is Bichat's description of them. Suppose, now, the action of the absorbents to be unvarying in degree, and the tubes themselves only possessed of life, not being at all subject to the nervous influence; having only the *susceptibility* peculiar to their own peculiar tissue—their variations, at least, being only proportional to that. Their minuteness, and the consequent extreme tenuity of their coats, will not allow us absolutely to contradict it. My friend, Dr. Hirschfeld, who has studied under Tiedemann, and seen all his magnificent preparations of the absorbents, and those still more splendid by Tiedemann's late prosector, Folman, never saw any thing like nerves demonstrated in the coats of these vessels; yet he has learned to believe from them that "they are liable to inflammation." Experiment and research may prove whether it be the vessels themselves or the surrounding cellular tissue which is inflamed. Mascagni found pus in them, and thence concluded they had been inflamed: might not the pus have been taken up by them from a part which was inflamed?

But where are the first visible effects produced of inflammation of the absorbent system? It is in the gland, and probably in its parenchymatous structure. The vessel has been exposed to the action of the morbid matter as long as the gland; but it is that part of it which forms its contortions in the gland that first manifests the effects of irritation. The glands first become swollen, hard, and painful, and then possibly the vessel whose structure is continuous with it may become so too. Then, perhaps, the cellular tissue in its vicinity, and the vessel also by contiguity. But this is always retrograding;

* Anatomie Descriptive.

it is not the vessel of egress—that in the course which the poison has to pursue—that is affected, but that of ingress, with which the poison has been in contact for some time. The passage is obstructed by the stoppage in the gland, and the contents of the vessel stagnate, accumulate, and distort it, and the irritation is conveyed by contiguity to the surrounding cellular tissue, where nerves are in abundance.

Bichat says again, “they are evidently possessed of organic sensibility and insensible organic contractility: it is by these properties that they perform their functions, and the fluids are circulated in their ramifications,” &c. &c. He thinks this “the more remarkable because absorption goes on after death, and because he could maintain it by artificial heat;” but he says afterwards, that “this undoubtedly proceeds from the vital, not the artificial heat, being required for the exercise of this function; or rather, vital heat and absorption are two effects of a common cause—viz. of organic properties. As long as these properties remain adherent in the solids, they retain caloric, and will absorb; the instant they disappear, heat disappears and absorption ceases at the same time. Notwithstanding what Mascagni and many others have said, absorption cannot be relied on when the animal is cold: generally speaking, I have never observed it act more than two hours after death.”

This ceasing of the process after death may appear to militate against my theory of the necessity of their acting as long as they exist as tubes: but I would state first, that we can have no satisfactory proof that it does not go on even then.

If we argue, from the bulk of the fluids acted upon by the absorbents, it is liable to error; for transudation is continually going on even in the living body, and much more so in the dead, as the colour of the peritoneum in the vicinage of the liver fully proves. The serum is thus separated from the blood, and the coagulable part only occupies the veins alone; the arteries are empty, and where is all this serum effused but into the cavities and interstices of the body, by transudation or some process analogous to it?

If we argue from the state of the vessels, it is not conclusive: they ought

to contain fluid certainly, if absorption were going on, and, according to Bichat, they appear to do so “for two hours after death.” At this time, decomposition of part of the fluids has taken place, and the fluids themselves have become eliminated. Hence there will be elastic substances pressing on the outsides of these vessels, and annihilating their existence as tubes. Absorption will be in consequence impeded, but imbibition will have become general, and the interspace of every two fibres in the body will have become capable of imbibition, or transmission, according to the non-existence of prevention or the pressure of an overcoming power. Every thing approaching in shape to a cavity or canal, will be more or less in a state of collapse—*i. e.* it is now acted upon from *without* instead of *within*. In this way only can the process of absorption be made to cease.

But, it will be objected, if the absorbents of the body be reduced to *simple* capillary tubes, the prosecution of their functions could not be explained; for capillary tubes have no power *beyond* simply that of filling themselves, and the fluid absorbed then remains stationary. But this is not the case in living bodies: at the termination of the thoracic duct in the subclavian vein, its contents are seen absolutely *projected* into the mass of blood with some degree of force. This is to be explained partly by the fact that such capillary tube commences by many capillary absorbing mouths, all leading to, and communicating with, the first trunk of the absorbent system. Now the collected power of all these mouths may be able to do something more than simply fill the tube with which they communicate, and this may amount to a degree of propulsion. At the termination of the thoracic this must certainly be the case, for there is an immense disproportion between the aggregate calibre of the absorbents and that of the thoracic; and it is a law in hydrostatics, that the rapidity of a given quantity of fluid is increased in passing through a smaller space in equal times.

[To be continued.]

IMPERFORATE HYMEN.

To the Editor of the London Medical Gazette.

SIR,

THE following case of imperforate hymen has been transmitted to me from a relative practising in the country. As it may prove interesting to your readers, probably you will oblige me by giving it insertion in the pages of your valuable journal.

I remain, Sir,
Your obedient servant,
GEORGE JEWEL.

Sackville-Street, Feb. 28, 1831.

In the month of August last my assistant went to visit a female, ætat. 20, residing a few miles in the country, who was said to be labouring under severe colic. Upon his arrival he found the abdomen exceedingly tumefied, and painful to the touch. She had repeated vomitings, and no motion had taken place from the bowels for 24 hours. From the general tenderness of the abdomen, the case was considered to be one of peritoneal inflammation, and consequently twenty-four ounces of blood were immediately abstracted from the arm. Pills, containing ext. colocynth, calomel, and opium, were also administered, and directions given, that if the patient was not relieved, a message should be sent to me early in the morning. Being called to a labour in the course of the night, I was unable to attend early on the following day, as requested; my assistant, therefore, again saw the patient, and ascertained that the bowels were still confined, and that the bladder had not been evacuated for thirty hours. The catheter was sent for, but the patient objected to his introducing it. Having been relieved from my midwifery case, I lost no time in repairing to the patient, whom I found on her knees at the bed-side,—a position which, together with the expression of pain, forcibly struck me to be that of a woman in labour, the child being about to be expelled. Placing her on the bed, I carefully examined the abdomen, and found it greatly distended; the bladder being full, extended to the umbilicus. I then endeavoured to introduce the catheter in the usual way;

but being foiled in detecting the meatus, in consequence of the alteration in its position, occasioned by the distended state of the bladder, I at once exposed the parts, and in so doing discovered an imperforate hymen. After a little difficulty, I succeeded in passing the catheter, and drew off about three quarts of urine. Upon again examining the abdomen with my hand, I was astonished to find a distended uterus as large, indeed, as if the patient had arrived at the seventh month of gestation. Great relief from the evacuation of the urine was instantaneously obtained, but she still complained of pain coming on periodically in the uterus, which felt hard and contracted. Upon a further investigation into a history of the case, I found that the patient was twenty years of age, and that from the seventeenth year she had experienced monthly a considerable degree of pain in the region of the uterus, and which her friends were in hopes would have terminated in the appearance of the usual evacuation. The general health of the patient had been of late much disturbed, and she was often compelled to remain in bed a fortnight after the periodical abdominal pain had subsided. I could no longer entertain a doubt about the nature of the case, namely, that the functions of the uterus had been regularly performed, but that the catamenial secretion had been prevented from escaping. With a common lancet I made a tolerably extensive incision through the hymen, when there issued a quantity of a dark-coloured inodorous fluid, resembling meconium, to the amount of about two pounds. Having administered a dose of the tinct. opii, I left the patient much relieved from her sufferings. Upon calling the following day, I again found an accumulation of urine in the bladder, and again had recourse to the catheter. I also ascertained that nearly a gallon of the same dark fluid which I had seen the previous day, had been discharged from the uterus during the night. The patient has gradually recovered, and now menstruates regularly.

SAMUEL JEWEL.

Tregony, Feb. 1, 1831.

A
PHYSIOLOGICAL INQUIRY
INTO
THE USES OF THE SPLEEN.

BY JOHN TUSON, Esq.

MANY and various theories, which have been founded in misconception and error, have been adduced by different authors on the uses and functions of this hitherto mysterious and highly important organ. They have only tended to render *obscurum obscurius*, and are altogether inadequate to throw that light upon the subject which its vast importance in the animal economy so justly entitles it to, and have only ended in mystifying, instead of satisfactorily explaining, the object it was their intention to elucidate. Impressed with this opinion, I shall adduce a few facts and observations, which I trust will plainly point out its real uses, compressed in as small a compass as possible consistent with perspicuity. In this investigation, it is indispensibly necessary to introduce some remarks on its organization and structure, in order to put this matter into so clear a point of view, that this hitherto mysterious subject may no longer be involved in obscurity.

The spleen sends its blood to the liver; it is of a very soft and loose texture, and its blood-vessels are large. Its fabric appears to be much more simple than has been generally imagined; it is composed altogether of arteries, veins, and cellular substance, and these together make up its whole body, which is outwardly surrounded by the peritonæum. It contains more blood in proportion than any of the other viscera; it has no muscles, air vessels, or excretory ducts, interposed betwixt its blood-vessels; its blood hardly ever congeals, but looks of a dark brown colour.

Now let us see from this previous anatomical statement what useful conclusions may be drawn. It appears that this viscus is capable of containing a very considerable quantity of blood, and it incontrovertibly appears likewise that the sanguiferous system is only capable of containing a certain proportion, so that it follows that a considerable increase of its volume must necessarily be the re-

sult of the chyle being conveyed into the blood-vessels. It is perfectly unnecessary to the philosophic inquirer to point out the serious ills that would ensue were not some precautions taken to prevent the over-distention of the sanguiferous system. He must be well aware how carefully nature, in the formation of every part of the human frame, has provided and guarded against any evil that could by chance assail it. Taking a comprehensive view, marking the dependance and accordance of things, we shall find nature has not been less attentive in this respect; and we shall see that our all-wise and ever-provident protector, who has so harmoniously constructed every part of the human frame, has appropriated this viscus as a reservoir for the reception of this superfluous blood; thus obviating these difficulties. Contemplating this, viewing its structure, and observing how admirably well fitted it is for this important purpose, it is impossible to suspend our assent to the doctrine above stated. Here we have one of the grand purposes to which this important viscus is adapted; for the discovery of which the public are indebted to the persevering industry of Mr. Dobson. His experiments incontrovertibly prove that the spleen is replete with blood when the chyle is conveyed into the system; and, on the contrary, that it is empty when the office of digestion is fully completed. To his work I must refer the reader: it would be injustice in me to recite it. His experiments and observations are ingenious, and highly interesting, so much so that they have induced me to make the foregoing observations illustrating this theory. Imagine not, however, that I consider this the only important purpose to which this viscus is assigned: there are other purposes equally essential to the welfare and wellbeing of the animal economy, which the spleen is destined to contribute to, one of which is the formation of the bile. The pathological derangement of the spleen fully elucidates this doctrine; and what still further confirms this opinion is, that whenever the spleen is removed from the body by dissection, the liver becomes swelled and disordered, makes a less quantity of bile, and of a dark brown colour, while the animal is perpetually troubled with flatulence and indigestion.

The blood in the spleen is different

from the blood in every other part of the body, and is admirably well fitted for the secretion of bile, and this fully accounts why, upon its removal, the above stated inconvenience should ensue. It has still another, no less useful, office to perform. We must observe the splenic artery runs in a tortuous direction to the spleen, and in its course sends off seven or eight branches to the stomach, termed *vasa brevia*. When the stomach is empty, the whole of the blood that flows through the splenic artery, or nearly so, passes to the spleen; but when the stomach is distended, it presses upon the splenic artery, and prevents the quantity of blood flowing to that viscus. The blood then passes to the stomach by the *vasa brevia*, by which means it is enabled to secrete a greater quantity of gastric juice, by means of the *vasa brevia* ramifying on its mucous membrane, and thus promoting digestion.

The physiological and pathological deductions and inferences from the foregoing statement, leave no room to doubt but that the spleen is intended for the purposes above assigned, and I think we may now safely say—

— Quod optanti Divum promittere nemo
Auderet, volvenda dies en attulit ultro.

JOHN TUSON.

Howland-Street, Feb. 16th, 1831.

MEDICO-BOTANICAL SOCIETY.

Wednesday, 10th Feb. 1831.

EARL STANHOPE, PRESIDENT, IN THE
CHAIR.

The Active Principles of certain Vegetables—particularly Observations on Quinia, Cinchona, and the Indigenous Substitutes for them, &c. &c.—contained in the Inaugural Address by the Professor of Botany.

AFTER the admission of the Rev. Sir R. Peate, and the election of the Hon. George Lamb and Mr. Clendinning as fellows, and the exhibition of presents, namely, some specimens of the hermodactyle, which resembles colchicum, and is said by Trallian, of Alexandria, to have been useful in gout, from Sir H. Hallford, Bart.; several bottles of Madar powder, from Sir Jas. Macgrigor; samples of scammony of different de-

grees of purity and value; various books, &c. &c. the President called on the Professor of Botany, Mr. Gilbert Burnett, for his inaugural address.

Of this address, which occupied an hour in rather rapid delivery, we can offer only a very summary abstract. It commenced with some general remarks on the objects of the society, and the benefits its researches are likely to bestow upon mankind. This section thus concluded:—"Much lately has been done in the investigation of diseases, their causes, their symptoms, and their effects; pathological anatomy has revealed the changes which various structures undergo, some of which morbid conditions impair the energies, and others are incompatible with the duration of life. But what avails it, that the physician can trace by symptoms the successive stages of disorganization as they proceed in structures concealed from view? What avails it, that the surgeon can proclaim the appearance of such morbid alterations long before dissection unfolds them to the light? What avails it, that both can foretell the impairment or destruction of vital parts, without they can at the same time learn to check the ravages of disease, and either alleviate the sufferings of the patient, or afford him a perfect cure? Without such an application of this art, the means of obtaining it would to many be repulsive, and the science itself not a blessing, but a curse; as the foreknowledge of ills, which could not be relieved, must but aggravate the misery man is called on to endure. But such is not the opprobrium of our useful and hence noble arts; for the theory of physic is founded on experience, and the benefits of its practice who can venture to deny? As sciences, medicine and surgery find few their equals, and as arts, they are excelled by none.

"Much, I repeat it, has been lately done to advance our knowledge of disease, and something, though much less, to perfect our instruments of cure. These, however, are sister sciences, or rather their connexion is of a still closer kind; they are twins, which are naturally, and for ever should remain, inseparably conjoined: and for the Medico-Botanical Society, whose attention is especially directed to this point, has the grateful task been left of perfecting this union; on it devolves the duty of steadying the arm of science, and plac-

ing surer weapons in her hand; that is, of providing for physic new and more certain remedial means."

We cannot pretend to follow the lecturer in his history of medico-botanical science; the observations on quinia and peruvian bark cannot, however, be well omitted. "I fear," continued Mr. B. "that an accumulation of the evidence of how much is wanted to be known on the points which this society has proposed as the objects of its chief inquiry, might weary the attention of the meeting; I will, therefore, add but one example more.

"The value of peruvian bark is notorious; it is likewise known to every one that there are many species of cinchona, differing in their efficacy and worth. Of these, three are admitted into our London Pharmacopœia, viz. cinchona lancifolia, affording the quilled or pale brown bark; C. oblongifolia, yielding the red bark; and C. cordifolia, which gives the yellow bark. Now of these three it is well known that the lance-leaved or quilled bark has, in general, been the most esteemed; still the oblongifolia or red bark has not been without its advocates; indeed popularly it was so highly prized that in the market it would occasionally fetch threefold the price of the brown, and six times as much as the yellow or heart-leaved species, which was comparatively slighted both by the profession and the public. Perhaps the scarcity of the red bark contributed something to its high estimation, as the relative abundance of the yellow not improbably tended to increase its disfavour: just as at the present time no one will use, indeed *who would condescend to use*, our indigenous, simple, aromatic, and astringent bitters — menyantbes, teucrium, salix, acorus, and bistorta, which grow abundantly at Hampstead, Highgate, Battersea, and Paddington, when they can have quassia, catechu, cinchona, and calomela, by sending to Hindostan, Jamaica, Mozambique, or Peru?

"And here (as in a parenthesis) I would observe, that our native medicinal herbs have of late been too much neglected; for certain it is, that we compass half of the globe to import a drug, the prototype of which not unfrequently solicits our hands at home. I, for one, can never think that all those plants are useless which we use not;

that such countless myriads of beautiful herbs that 'spring profusely wild o'er all the deep green earth,' spring oft in vain, because in vain they court man's notice and regard. I never can believe that Providence has armed the weeds of foreign lands with powers necessary for us, whilst ours are impotent to heal: I never can believe our herbs inert, whilst every plant in other climes may boast itself a physician's staff. . . .

"A final cause for this might, perhaps, however, by some be sought and found in the necessity for labour. I know that it is by a merciful dispensation that man has been condemned in the sweat of his brow to eat his bread; I feel that where necessity compels not to exertion, indolence debases man almost to a level with the brute; and likewise I confess, that where most is required for the body, there most fully are developed the powers of the mind: still I cannot but perceive that many of our plants want but to grow upon the Andes or the Alps, to be sought with avidity and treated with respect. . . .

"It is, therefore, a matter of no mean importance to which, by a resolution of the council, the attention of the scientific world at large, the members of this society in general, and of my colleagues and myself in particular, is directed by their determination to award the Silver Medal of the present session to the best essay on the Nature and Properties of any Indigenous Plant, the medicinal qualities of which have been hitherto unknown, or only imperfectly recorded. It appears to me that this will be sinking a shaft in a very rich mine of scientific discovery, of truly philosophical investigation. I doubt not that we shall find many of the remedies now sought from the tropics and the poles growing at our doors, and soliciting to be allowed to relieve our wants. It is an amiable idea, and one that experience goes far to verify, that wherever natural circumstances favour the production of disease, Nature, that is, Nature's God, has beneficently conjoined the means of cure. May not the late experiments with salicine be given as an illustration? for although we have been so long ploughing the Atlantic, and burthening the bosom of the deep to bring home our harvests of Peruvian ague-cure, the crops of the ever-valuable cinchona, salicine extracted from our willows, as far as experiments as yet

have gone, proves equally effectual as the quinine of peruvian bark. Where do agues most commonly prevail? where do we find intermittent and remittent fevers of the greatest frequency and most fatal severity? Where! but in wet low lands, in marshy and in fen-ny districts. And where do willows love to dwell? Where! but in those very fens and marshes, as if planted by the hand of Providence to relieve the diseases inseparable therefrom. We cannot but regard them as the living laboratories of nature to provide salicine for the use of man.

* * * * *

“To return to the point whence this episode sprung, and to the path whence a favourite topic has so long seduced us: There are several circumstances connected with the history of quinia and cinchonia, the proximate principles of Peruvian bark, to which I could much wish to invite the attention of my colleagues, the professors of chemistry and *materia medica*; for, to my mind, they require much further elucidation, and many experiments seem wanting to ascertain correctly the properties of these barks, and of the principles they respectively afford. The quilled, or pale-brown bark, was (as I previously observed) a few years since so much more highly prized than the yellow, that it was sold for sixteen shillings a pound, while the other would scarcely fetch a crown; and yet quinia, now so much esteemed, and believed to be the potent principle of the Peruvian barks, is abundant in the yellow, and all but absent from the quilled. Indeed, I am informed by my friend, Mr. Hennell, of Apothecaries’ Hall, one of the most indefatigable and intelligent chemists of the day, that if the specimens submitted to analysis be correctly sorted—for in commerce they are generally met with mixed—no quinia at all will be found in the quilled bark, but abundance of cinchonia; while in the yellow bark the quinia is abundant, and the cinchonia wanting.

“Now this is a result which could not, *à priori*, have been conceived, for it is the quinia which is now extolled for its extraordinary curative effects, which principle, be it noted, is absent, or all but absent, from the quilled bark, so lately prized for similar powers; while cinchonia, which abounds therein, is disesteemed; and on the other hand,

as a counterpart to this paradox, the yellow bark, so long neglected, yields abundantly, almost exclusively, quinia, the present fashionable tonic; while it contains none, or very little, of that other principle, cinchonia, to which all the former cures of its rival, the lance-leaved bark, must be attributed.

“In the red bark both cinchonia and quinia are found, but in much smaller relative proportions. It is likewise a circumstance worthy of notice, that some of the other species of cinchonia, specimens of whose bark occasionally reach us, are said to afford these principles more abundantly than any of the officinal ones; and it is probable they may advantageously be introduced as substitutes.”

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“Now, from these premises we cannot avoid the conclusion, that further experiments and investigations, both botanical, chemical, and medical, are much required; for if the quilled bark really did cure ague (and of it there can be no doubt), and if in it there is little or no quinia, but cinchonia is present in abundance, either its native quinia must be converted by the chemist’s operations into cinchonia, or the neglect with which cinchonia is treated can scarcely be its due. Perhaps the merits of quinia may have been too much extolled, as well as cinchonia too lowly rated; or it is not impossible that the red bark, which contains the two principles in question; or a preparation or formula comprising both quinia and cinchonia, whencesoever extracted, may be found the most efficient means of administering relief in ague.

“But these are problems requiring much attentive consideration; and experience must prove whether the former confidence in quilled bark, or the present trust in quinia, be most correct. Probably cinchonia is esteemed too lightly; it demands a series of experiments to determine its medicinal effects. This is, however, but one of many points equally requiring investigation, and which must be more fully discussed hereafter; it is only at this present glanced at, to shew how much, and in how many ways, the exertions of our society are wanted—how much, and in how many ways, the inquiries of its members can benefit the world at large.”

“The extraction of the proximate

principles of plants, of those especially on which their peculiar properties depend, is doubtless a triumphal step in vegetable chemistry. It is a discovery that promises to open a new era in science, and to work a complete revolution in the armoury of physic. To the superficial observer it might seem that these discoveries, which are undoubtedly of very recent date, had been long obscurely adumbrated; as it has for years been known that the stimulating powers of many plants, as of the cruciferae, for example, are destroyed by simple exsiccation; that the poisonous principle of mercurialis perennis can be removed by boiling the herb in water, when it becomes a palatable and harmless esculent; that the virulent qualities of the cassava are separable by heat, and that, after roasting, it is esteemed an admirable and nutritious food. Such knowledge, however, differs widely from that which has enabled us to educe and exhibit in a constant and determined form quinia and cinchonia as the active proximate principles of Peruvian bark—to extract salicina from willows, veratria from colchicum, and white hellebore, morphia, narcotine, and meconic acid from opium, and so forth.

“Great caution—almost a jealous caution, is however required in watching both the extraction of these principles and the records of their effects. For it is not impossible, nay, it is far from being improbable, that some of these substances are *products* rather than *educts* of the chemist's operations, just as sugar may be produced from rags, tan from saw-dust, vinegar from wood, and so on. Not that the mere fact of such transmutations would render the substances *produced* a whit less valuable than if they were *educted*; their value must depend upon their intrinsic worth. Indeed it may be far more advantageous, under certain circumstances, to resort to the laboratory of the chemist than to the laboratory of nature, for many of them. We know that wood consists elementarily of charcoal and water; that starch and gum, and sugar, are similar in their elements likewise, and that they only differ from each other in their relative definite proportions: we know that nature, by varying the ratios of these few simple elements, changes, as in the ripening of fruit, tasteless lignin

into powerful acid, which, in its turn, becomes converted into sugar, often impregnated with peculiar essential oils, sometimes fetid, sometimes odorous, sometimes grateful to the palate, and others disagreeable in the extreme; and thus in plants, as in her living retorts, nature so modifies and combines the atoms of charcoal and water submitted to her influence, as to form gum, sugar, starch, lignin, resins, oils, acids, alkalies and alkaloids, with numerous other proximate principles in abundance, of every kind and in every grade of variety, by merely varying the relative yet definite proportions of the same simple constituents—viz. oxygen, hydrogen, and carbon; these three other elements being seldom and sparingly employed. Furthermore, we know that in some instances our laboratories can imitate the vegetable alembics, or render their processes subservient to our designs. Thus, in malt-ing barley, germination is suddenly checked when the starch of the grain has become converted into sugar. Again, by heat starch can be changed into gum, or sugar be transmuted into vinegar or oxalic acid. It is therefore not impossible that many of the more active vegetable principles may be in like manner formed—the more scarce from the more abundant.

“That some of the newly-discovered bodies, classed for convenience as vegetable proximate principles, such as caffeine, asparagine, piperine, &c. are not so, *i. e.* are not educts but products, is more than probable when we find that they do not exhibit the specific effects peculiar to the substances whence they are obtained. Thus we learn from Mr. Brande that coffee is narcotic; but caffeine, as that celebrated chemist has proved by personal experiment, has (at least in scruple doses) no sensible narcotic powers. Again: asparagine does not communicate to urine that peculiar odour which asparagus, when eaten, invariably is found to do; and furthermore, piperine, the so-called proximate principle of pepper, is entirely destitute of pungency and heat. These three, and many others, will probably be hereafter shewn to be the creations of the chemist, just as wine is not (though often called so) the juice of the grape, nor beer of corn, but are produced, not educted, therefrom by fermentation; and as alcohol (including brandies and

spirits of every kind) is not educed, but produced from wine and sweetwort by distillation, or formed, as just discovered, by condensing the vapours which rise from bread while baking.

"It may then—and I repeat it for the sake of the impression which a repeated proposition is designed to make—it may be found hereafter more profitable to form many of these substances now known as the proximate principles of vegetables, and at present derived exclusively from plants, directly from their elements, or indirectly, by the transmutation of common and abundant matters in the laboratory of the chemist, than to procure them intermediately from trees, shrubs, and herbs, the living elaboratories of nature; just as oxalic acid can be made from hair, gristle, and such-like refuse matters; or produced by the distillation of sugar with nitric acid, instead of being educed from the *oxalis acetosella corniculata*, &c.; or as the hydrocyanic acid is obtained at a surprising diminution of expense, from prussian blue (which can be made from almost any offal), to what it could be educed from bitter almonds, cherry-laurel leaves, plum and peach kernels, &c. &c. where these acids naturally exist, and which were once esteemed their only sources.

"Indeed one great object of the vegetable world would seem to be to anticipate the arts, and to provide numerous comforts and conveniences, such as clothes and shelter, nutritious food and efficient medicines, for man, long before he was able to provide any for himself; and not for man only, but for the whole animal creation. Of this doctrine vegetable physiology affords numerous interesting illustrations; and although we at present contemplate the processes of nature but as through a glass darkly, though we see but in part and know but in part, still thus far we can perceive, that, whether we sleep or whether we wake, these indefatigable servants are labouring for our advantage; they are ever actively preparing and purveying sugar, starch, gluten, gum, cotton, wood, flax, hemp, and many, very many, other substances useful and necessary to man, with an alacrity, a perseverance, and a certainty, which are and would be esteemed truly astonishing, were we not surrounded with such natural miracles, and did we not live in a world of wonders. Many of

these works will doubtless for ever remain inimitable by human art. To bounteous nature must we ever be indebted for many of her most precious gifts. We never can hope to penetrate the arcana of all her works, though we can, in some few particulars, trace her course, and imitate her productions. Still, as we have long much lightened human labour by the substitution of brute strength, and more lately superseded the use of many brute animals by the adaptation of machinery, as we have thus already reclaimed much soil from the pasturage of cattle for the growth of food for man; and as by the introduction of steam and rail-roads we shall reclaim much more, so, on the other hand, it is not improbable that much of the labour of tilling the ground for the growth of human food may, at some future time, be avoided by the immediate production of many nutritious substances from their elements, instead of deriving them intermediately through the culture of plants; or, at any rate, it is not improbable that men will so far advance in science and in art as to be enabled to convert the less into the more useful—the more into the less abundant matters, as, for example, fragments of wood, shavings, and sawdust, into starch, and thence into gum; worn-out flax, *i. e.* old linen rags, into sugar, and so on; and thus, if it were not for placing an important subject in a somewhat ludicrous point of view, we might hope, after having worn out our clothes and houses, to feed upon them, just as some insects are said to devour their exuvie; *e. g.* spiders will eat their cast off skins.

Here our report must cease; we cannot pretend to follow the lecturer in his remarks—some of them curious, some important—on the extraction of the proximate principles of vegetables, or their conversion into each other; and on the distinction of vegetable products from vegetable educts; neither can we advert to his observations on the importance of botany as an integral part of a medical education; it is enough for us to say, that we fully agree with him, and highly approve of the late regulations of the College and Hall, which have added botany officially to their lists of studies.

The society adjourned to Wednesday, 9th March, when the poppy and opium will form the subjects for discussion.

ROYAL INSTITUTION,

Friday, March 4, 1831.

WILLIAM POLE, ESQ. F.R.S. VICE-PRES.
IN THE CHAIR.*Dr. E. Clark on Vesuvius and Pompeii.*

ONE of the most numerous meetings of the season crowded the Institution this evening, to hear Dr. Clark's account of Vesuvius and Pompeii; and if we may judge from the merry faces of the hundreds of laughing philosophers that were gathered together, and the frequent peals of boisterous mirth with which the learned doctor was interrupted, few persons left the amphitheatre without having added much to their span of life; provided always, that, as some physiologists assert, every smile adds a minute, and every hearty laugh an hour, to man's sojourn here. Indeed there is so much naïveté in the doctor's manner, and such peculiarly sudden transitions in his language, from the lofty declamatory style to the humblest colloquial phrases, that it is utterly impossible to preserve that gravity of demeanor which is usually thought to characterize a philosophic assembly; and we are somewhat doubtful, laughter-loving creatures as we confess ourselves to be, whether following thus ardently the precepts of Democritus be exactly in unison with the genius of this place. It is well—and truly, for a mixed assemblage of philo and pseudo-sophs, it is required—that much of the “*dulce*” should with the “*utile*” be blended; still, if naked truth, ever most beautiful in nudity, cannot be tolerated in this age of art, but must, like our very statues, be clothed to suit the false delicacy of public taste, it nevertheless should not be overwhelmed with meretricious ornament: the less covering man adds the better—a fig-leaf is quite enough; more only hides what none should be ashamed to show or to see. But to return, and to illustrate the subject before us by an imitation of our prototype, we would, with our trans-cingular brethren, say in a warning voice, that although a little quince is good, an apple-pie should not be made all of quinces.

Vesuvius, Dr. Clark observed, is now much in the same state in which it was in the year 1687—*i.e.* within the great crater there is a plain, whence

rises a smaller volcanic mountain, formed by successive eruptions, and which will probably go on increasing until it fills the large crater, when it will again overflow the side, and perhaps again scatter desolation over the surrounding country. But for the history both of Vesuvius and Pompeii we shall refer to books already published on the subject, for from them Dr. C.'s descriptions were chiefly compiled—*e.g.* Pliny's Letters, and the works of Hamilton, Lyall, Donaldson, and others. However, we cannot omit publishing Dr. C.'s assertion, for the consolation of our wives and daughters, should they consult the columns of our Gazette, that the ladies of Pompeii wore both false teeth and wigs. The joke as to the necessity of the ancients crying through a funnel, in order to fill their narrow-necked lachrymatories, is too trite to need repetition, and though not intended as such, the practical one exhibited of stirring up Vesuvius with a poker, was ludicrous in the extreme.

In the library were various works and plates, illustrative of the lecture; also some very curious native Kandyan drawings, and a Kandyan manuscript, on thin wood, said to be one of the 2060 sermons preached by Boodh. We also noticed a very ingenious geometrical pen; the Rev. Mr. Stonestreet's tide semaphor, and Colonel Walker's fire-escape: surely with all the methods of escape from fire which have been now invented, it must be to suit his own convenience if a man should hereafter be burned alive.

On Friday, 11th March, Mr. Ainger will exhibit and explain Mr. Mordant's machinery for making pens and pencils.

MEDICAL SOCIETY OF LONDON.

THE Fothergillian gold medal for the present year has been awarded to Mr. W. A. GUY, a student in medicine, for the best essay on asthma. The medal was presented to the successful candidate on Tuesday last, being the anniversary meeting of this very useful society.

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE,

DELIVERED BY DR. ELLIOTSON,

February 21, 1831.

*Chronic Bronchitis and Disease of the Heart—
Gastritis—Leucorrhœa—Rheumatism.*

SINCE we last met, gentlemen, one patient has died, and of *chronic bronchitis and disease of the heart*. The case was that of A. B. æt. 40, who said he had been ill a year. Most of the cases which now terminate fatally among us, are, I am happy to say, cases of long-continued organic disease. His symptoms were difficulty of breathing, cough, and mucous expectoration—the expectoration was frothy, and sometimes, he said, dark. There is a great variety in the character of the expectoration in chronic bronchitis; sometimes it is clear, sometimes opaque, sometimes frothy, sometimes blue, sometimes yellow (I have seen it of a bile yellow), and sometimes grey or blackish; sometimes glairy, sometimes pretty solid; there is no end to the variety in different cases, and in the same cases at different times. He likewise had œdema of the legs. On listening over the chest, there was found sonorous and sibilous rattle in almost every part of the chest. The chronic bronchitis was inferred from them, and it was quite sufficient, in conjunction with the other symptoms, to give rise to the difficulty of breathing, the cough, the expectoration, and likewise to the œdema of the legs. Notwithstanding, however, that the chronic bronchitis was quite sufficient to explain all these symptoms, I of course examined his abdomen, and I found there was more or less fluctuation in it, and that the liver was distinctly enlarged and hardened. He therefore had besides chronic bronchitis, ascites, and disease of the liver. On listening to the heart, I found that it beat too strongly, and that, *at the moment of the pulse*, a bellows-sound was heard, which was loudest in the situation of the left ventricle,—loudest immediately to the left of the sternum. When the pulse took place, this bellows-sound occurred, and immediately afterwards there was a short, clear, strong sound, such as is ascribed by Laennec to the auricles, but much louder and much clearer than natural. It was not the loudest at the part where the bellows-sound was heard, but higher up. The auricles are situated above the ventricles, and it was in the region of the auricles that this sound was the loudest. I concluded, therefore, that there was an impediment to the progress of the blood from the left ventricle into the aorta, and that an auricle or the auricles were dilated, if Laennec was right in ascribing the second sound to the auricles.

The patient's pulse justified me in taking away a moderate quantity of blood, and he was therefore bled to twelve ounces. On account of the great difficulty of breathing, and the degree of sonorous rattle, I carried on the antiphlogistic regimen still further, by giving him two grains of calomel three times a day, with a scruple of tincture of digitalis. On the 23d November it was found necessary to bleed him again, but only to twelve ounces, as the disease was chronic. He seemed to have suffered an aggravation of his symptoms, and was labouring under an acute attack supervening on the chronic disease; but the chronic disease made it dangerous to have recourse to active depletion, and I therefore took away only twelve ounces of blood. His symptoms, however, continuing, and his pulse not declining, at the end of a month, that is to say, on the 21st December, a fresh attack came on, his breathing became more difficult, the sonorous rattle increased, and he was bled again, still, however, only to twelve ounces. His pulse bore this so well, that, his symptoms still continuing, I bled him in a week to a pint, and, in about a week after, cupped him on the chest. Still it was necessary, from the difficulty of breathing, to have recourse to the bleeding again, and he was bled on the 7th January to ten ounces, and his mouth, which was formerly sore, being now well, and a fresh attack appearing to come on, calomel was given, in doses of three grains twice a day. It was necessary, however, still to go on with small bleedings, which always afforded him great relief, and the blood was always much buffed and cupped. He was bled on the 21st January to eight ounces, on the 27th to twelve ounces more, and on the third of this month (February) another acute attack took place, which made it necessary to cup him on the chest to ten ounces. The windows of the ward, I found, had been opened to let out the smoke, and he was then suffering under an attack of acute bronchitis, in consequence; however, the disease having lasted so long, and he having undergone several bleedings, I could only bleed him once, which afforded him as usual great relief, and that was all that could be expected. He was obliged to sit up in bed, and he sank in the most gradual manner, and died on the 14th instant.

He was not inspected in the hospital, but some gentlemen were so kind as to go to his late residence and open him there. I understand that the lungs shewed chronic bronchitis in every part; that the bronchial tubes throughout the organ were very much thickened, shewing the nature of the disease. The lungs also were very heavy, and filled with a frothy fluid, so that on lifting up a section, bloody serous fluid poured forth, as from a sponge. The lungs were pervious in every part, as they generally are in chronic

bronchitis; but there was a large collection of fluid in the tubes and air-cells, and perhaps also in the cellular membrane of the lungs, and consequently on squeezing them, it not only ran out, but ran out frothy, on account of every air-cell still being pervious to the air. There was no effusion into the cavity of the chest on either side, and that was known not to have been the case, because respiration was fully heard on each side, and at even the lowest part. On examining the heart, however, the existence of disease there was very striking. The left ventricle was more or less hypertrophied and dilated, as I will shew you, and very considerable valvular disease existed. You see the left ventricle in a state of hypertrophy. Although it is not thicker than natural, yet the cavity is of larger size than it should be; and as the thickness is at least fully of its natural dimensions, there must consequently be hypertrophy—there must have been more or less addition of substance, to maintain the natural thickness under the dilatation: this accounts for the original violence of the pulse, and the strength of the heart's action.

The pericardium, I should have mentioned, was found coherent throughout, and I would beg particularly to draw your attention to this circumstance, because some persons have an idea that adhesion, or cohesion of the pericardium, is a very dangerous thing, and they have the same fancy respecting the lungs—that is to say, cohesion of the pulmonary and costal pleuræ. I do not, however, think that any harm in general arises from these adhesions. Many people think that if they have pain in the chest, they have adhesions there, and make themselves very miserable: should that be the case, there is usually no harm in it. No doubt, if all were examined, the greater part of us would be found to have some adhesions in the pleuræ, though we are in good health; and so it is with the pericardium. I never saw any symptoms arise from universal cohesion of the pericardium. I know that partial adhesions, if very strong, will occasionally give rise to symptoms, that if the heart be adherent at one single point to the parietal pericardium—then when the person places himself in such a posture as will put the adhesion on the stretch, a pain will be felt, but that is all. This man had no symptoms about the heart but what were referable to the hypertrophy of the left ventricle and valvular disease. A patient of one of my colleagues was examined last week who died of chronic pleuritis, which had caused empyema, and in whom the pericardium was completely coherent, and yet the man had no signs of cardiac disease. My colleague had examined his heart in common with other parts of his chest, and no signs of pericarditis were detected by him, or any disease of the heart, nor did the man make the

slightest complaint of any disease about the heart. The cohesion must have been of long standing.

However, this cohesion of the pericardium in the particular case now under consideration illustrates another fact—namely, that where there is organic disease within, and the result of inflammation—where, for instance, the internal membrane of the heart is diseased from previous inflammation, the pericardium is generally affected likewise. Here there is considerable valvular disease within, and the pericardium had been in a state of considerable inflammation without. I presume that pericarditis had existed in this individual at one time or other, and glued the cardiac and parietal portions of the pericardium together. I have mentioned over and over again that I believe the greater number of diseases of the heart which occur in young persons, and in persons not past the prime of life, begin in the first instance as inflammations, and inflammations too of the pericardium: that appeared to be the case here. There was no pericardial cavity externally to the heart, for the pericardium was coherent in every spot.

The part which I now shew you is the left ventricle laid open. Here are the aortic valves, rather thickened, but the mitral valve is in a state of great disease; it is thickened, cartilaginous, and ossified. The two portions of the curtain are grown up together, completely all around, and form a pouch. That portion of the internal membrane of the heart which runs from the aortic valves to form the mitral valve, and which you see is continuous, is diseased—grown up together in the form of a pouch. The opening of the valves is necessarily smaller than it should be; however it is not by any means very small. The aortic valves are also thickened, and fleshy to the feel. Notwithstanding, however, the opening of the mitral valve is necessarily diminished, yet it is by no means so much diminished as in many cases that I can shew you. You now see the heart from behind. Here is the opening of the left auricle; this is the commencement, and instead of being direct, there is a sort of passage formed. If you look at the opening from the auricle, you will see that bone has been deposited, and, as is usually the case, under the lining membrane, the bone has given way, and here is the bare bone, over which the blood must have run in actual contact.

Frequently, however, the diminution of the opening is more considerable than this. Here is a specimen of the same disease, where the opening is much reduced, and you have the same pouch-like appearance of the mitral valve. This is a very long pouch, and the opening is smaller—not more than one-third or one-fourth of its natural dimensions: the disease is more intense. Here is

another instance of the same affection. You see the opening of the right auricle from behind into the right ventricle. It is well to look at these things, because I know that many persons who are not in the habit of opening hearts, do not easily discover what is disease and what is not. Persons easily fall out of the way of detecting morbid anatomy, in the distractions of private practice. Although this is familiar and common to us, yet when persons are not in the habit of opening hearts, there is great difficulty in detecting even considerable morbid appearances. Here is a third specimen, where you see the same thing. When the disease is in the very highest degree, it is as you observe it in this specimen. Here is the mitral valve so grown up that it is no more than a mere slit. You would hardly suppose this was the mitral valve. The blood must have had extreme difficulty in passing through; and the patient could not have lived a moment if the disease had become more intense than in this specimen. The man from whom this was taken came to the hospital in a dying state, and expired before the end of the week. It is the subject of my second engraving.

In the lectures which I have published, you will find my account in accordance with what I have now shewn you. I have said, "In the natural state the valves are translucent, fine, and flexible; when the subject of chronic inflammation, they become opaque, yellowish, thick, and rigid. These changes are seen in dead subjects in various degrees, and may be considerable without reaching such a point as sensibly to disturb function." You cannot tell by any signs during life that a valve is merely thickened, or opaque, or even diseased in any way; you can only say, that there is an impediment to the course of the blood, or its retrogression is not prevented. If the valve be ever so much diseased, and yet do not afford any impediment to the progress of the blood, and fully prevents its regression, I do not believe any one could tell it before death. It is only when the change impairs the function that it can be discovered. "Their progress," I continue, "also advances with various degrees of celerity. The surface of the valves may retain its smoothness, though frequently we observe asperities, from excrescences or deposition." In this preparation, the valve, for example, has retained its smoothness; it is perfectly smooth, whereas in the heart I now shew you there are numerous asperities, from a deposition. This is the case with all valves; sometimes they are perfectly smooth, and become very hard and thickened; but in other cases they are rough, from deposition. "The induration varies in different points, so that one portion is partly translucent, while another is not only opaque and rigid, but even bony." You see that is

the case in this heart; there is a spot here translucent and quite smooth, and here another part is not only opaque and rigid, but even bony. "The induration at last amounts to cartilage, and the part creaks when cut; the last stage is complete ossification. As the thickening and the induration proceed, the opening becomes narrow, both from the thickening of the edges and from the approach of the portion of valves towards each other." The mere thickening will, of course, lessen the opening; but the opening is lessened also from another circumstance. As the valves approach each other, they become rigid; they will not yield to the blood when streaming out. Thus you have a narrowness produced from two circumstances: the valves are thicker than they should be, and thus take too much room; and, secondly, they are rigid, so that they will not get out of the way when the blood streams forth. "The several portions of the tricuspid and bicuspid valves grow up completely into a membrane, with an aperture in its centre." In this preparation you see it is grown up completely into a membrane, with a small aperture in the centre. You will particularly see this in some other preparations. I have not an instance of it in the tricuspid valve, because disease in it is comparatively so very rare. "This aperture is sometimes, as seen from the ventricle, and generally when viewed from the auricle, not circular, but longitudinal—a mere slit." When seen even from the ventricles, it is sometimes longitudinal, as in the specimen I now shew you, but more frequently it is circular; generally, when viewed from an auricle, it is not circular, but more or less longitudinal, or crescent shape. If you look at this heart, for example, from the auricle, the aperture is not circular but longitudinal; and if you examine any of these preparations, you will find it in them to be of the same shape. In many cases it is at last "a mere slit."

Respecting the particular form, that of a crescent, the first observations, as far as I know, were made upon it by Mr. Adam, of Ireland. That gentleman remarks, that this slit is "usually of a crescent form, with the concavity towards the root of the aorta, and the convexity backwards." Now you observe, here is the root of the aorta close to this side, and the concavity of the crescent is towards it, while the convexity of the crescent looks backwards. Mr. Adam's remark I believe to be perfectly accurate. The aorta is, of course, nearer to the septum than the opening of the mitral valve; and you observe that the concave part of the slit is towards the root of the aorta, and the convexity backwards. "The extension," I have said, "of the valvular membrane is sometimes so considerable that it appears to project into the ventricle in the form of a pouch, or funnel;" this is the observation of the

French. "The semilunar valves stand firm and convex, as if distended by the repletion of their sacs, and grow up so as to leave only a small round or triangular opening in their middle." In this specimen, which I have shewn you before, here is the aorta and the three semilunar valves grown up, so as to leave a mere tri-cornered opening. You see that this preparation exemplifies what I mentioned of the valves affording an impediment to the blood, from becoming so rigid that they cannot get out of the way. You see that their convexity is just as if they were distended with wool.

"When the impediment to the progress of the blood is considerable," I have said, "the auricle behind is usually dilated, and sometimes attenuated; sometimes of its natural thickness; sometimes, though rarely, thickened; whether it be an auriculo-ventricular opening, or a ventriculo-arterial, the effect is the same. Occasionally, when a ventricular opening is narrowed, the ventricle behind is dilated or thickened, or both; but frequently this is not the case. The auricles suffer from being muscular to only a certain extent, and throughout of insignificant thickness, compared with the ventricles." Now in this heart, the auricle behind the disease is very much dilated; the left auricle is of considerable size—much larger than it ought to be. The proper auricle, after pericarditis, is frequently observed to be bound down so that it is lost; the external appearance of the true or proper auricle, or the appendix to the auricle, whatever we choose to call it, is lost. Here it is lost; but the sinus of the auricle is considerably dilated. It is not through an impediment necessarily of the mitral opening that the left auricle becomes dilated; for if the obstruction be at the mouth of the aorta, still the auricle will often become dilated, just as if there had been an obstruction at the auricular opening, or the opening of the mitral valve. Sometimes you will see it is the right auricle which suffers dilatation, although the obstruction has been at the mouth of the aorta, or at the opening of the mitral valve, while the left auricle maintains its dimensions and does not dilate; at so great a distance will obstruction sometimes operate in causing dilatation.

Let us now consider the symptoms in this case. In the heart there was heard a loud clear sound after the pulse, when it is supposed by Laennec that the auricles contract. This loud clear noise was not only heard immediately after the pulse, and was followed by a pause, but it was heard loudest in the upper part of the cardiac region—that is to say, where the auricles are situated. This there could be no doubt of, for the case was shewn to several gentlemen who heard this as well as myself. One gentleman, who is very familiar with auscultation—a

physician—was very much struck with the loudness and clearness of the sound in the auricular region immediately after the pulse, and he concluded with me that of course the auricle would be found dilated, and you see it is dilated. After this loud clear sound, came a pause. Some difference of opinion exists as to the time of the contraction of the auricles: some maintain that the auricles contract before the ventricles, some after. One reason why I coincide with Laennec—though I do not make a positive assertion that he is right—is, that the sound which is ascribed by him to the auricle, is loudest in the situation of the auricles. That is certainly strong presumptive proof that Laennec is correct in the opinion he has advanced. Here was a case of dilatation of one auricle, and the sound was particularly loud in the region of the auricle, and occurred after the pulse and the heart's stroke.

Respecting, however, the other sound—the sound which took place when the pulse occurred—it must have arisen from an obstruction to the blood leaving the left ventricle and going to the aorta. Now I think you see clearly, that although the disease here was chiefly in the mitral valve, the aortic valves being only slightly thickened, and not sufficiently to cause any impediment, yet it is evident that the disease in the mitral valves must have greatly impeded the flow of blood from the left ventricle. There was a great deposition of bone, not at the opening of the mitral valve, but half way down between the edges of the mitral valve and the base of the aortic valve. There is a great projection of bone from the outside of the pouch of the mitral valve, extending into the left ventricle below the aortic valves, and this must have produced considerable impediment to the exit of the blood from the left ventricle into the aorta. If I bring the cut portions of the ventricles together, you will find, on attempting to pass the finger into the left ventricle from the aorta, that you meet with great difficulty from this bony solid projection of the immoveable side of the mitral valve. This is from no disease in the aortic valves; your finger passes them easily. The bony valve stands out into the left ventricle, just below them, and must, during life, have occasioned great obstruction. I do not know that this occurrence is noticed by any author, of disease of a valve of one opening affecting a different opening. Indeed the obstruction is really not at the aortic opening, but just before it. This quantity of bone afforded no impediment at all to the progress of the blood through the mitral valve; for the deposition has taken place in an outward direction, and caused the pouch of the mitral valve to be permanently extended.

This shews the truth of a remark which I have made on former occasions—viz. that

auscultation will not tell you what valve is diseased, or how a valve is diseased, or that any valve is diseased; it will only tell you that there is obstruction, and where that obstruction is; but not what the obstruction arises from. I recollect having two people at this hospital with a strong bellows-sound at the moment of the pulse, which was heard at the right side of the heart loudest, and not the left, and I of course concluded that there was an obstruction, which is a rare thing, to the progress of the blood from the right ventricle into the pulmonary artery. On opening the heart, the pulmonary artery was sound, but there was a mass of cartilage in the substance of the heart, extending from the pericardium, and pressing upon the right ventricle, just below the origin of the pulmonary artery, precisely as this mass before you does in the left. The only difference was that a part of the substance of the right ventricle was a mass of cartilage, and encroached upon the right cavity. Here the fixed and distended mitral valve is encroaching upon the left cavity, close to the spot of the blood's exit. It is impossible to force the finger from the aorta into the body of the ventricular cavity, and the bellows-sound at the moment of the pulse is fully explained. The disease of the mitral valve has also certainly lessened its opening, but not very considerably, as the chief disease was not towards its edges, and the auriculo-ventricular openings are in health so much larger than the ventriculo-arterial, that they will bear reduction without any great impediment to the flow of blood, and without bellows-sound; whereas the ventriculo-arterial openings being smaller, afford impediment and bellows-sound from the least loss of their proportion to the cavity of the ventricles.

You see that the disease has not been confined to the heart, but has extended to the aorta. There are patches of yellow substance under the inner coat, which at last would have been followed by ulceration of it, or have become bony; the inner coat in the latter case would have given way, and the blood would have washed over bare bone, as it must have done in the interior of the mitral valve.

There was a circumstance noticeable here which you may observe in many cases of disease of the heart, that some little time before death little or no bellows-sound was to be heard, and there was then no strong impulse of the heart. Now if the powers of the body become very much enfeebled, the blood is impelled from the different cavities of the heart with such slight force that a diminished opening will be quite sufficient for the quantity that has to escape, and no bellows-sound will be heard. The bellows-sound was diminished, or it really ceased in this case, for a few days before death. But even when there has been very considerable hypertro-

phy, and consequently strong action of the heart for a long time, you find, immediately before death, the action by no means strong; so that you could not, if you knew nothing of the case before hand, if you had made no previous observations, or received no history from others, say that the person was labouring under hypertrophy of the heart.

There were some patients presented, gentlemen, and among them were three women: one of these had laboured under

Gastritis.

Mary Turner, æt. 22, said she had been ill four days. She came here on account of *pleuritis*, it was said. I was desired to see her for *pleuritis*, but, on examining her, I found no sharp pain about the chest. She might have had this before she came in, but there was not that sharp pain in any part of the chest which is usually characteristic of *pleuritis*; but great pain of the epigastrium, increased on pressure, together with a burning heat in the stomach, especially when she took any thing into it; and there was also tenderness on the left side. You frequently see tenderness at the left hypochondrium when the stomach is affected, from the large end lying there. She had head-ache, and felt drowsy and weak; the pulse was full and soft, not hard and sharp, as it is in *pleuritis*, but as it for the most part is in affections of the mucous membrane,—full and soft. Her tongue was dry, and faintly brown. Although it was clearly a case of *gastritis*, the tongue was not red at the back, nor at the edges, nor at the tip. It is by no means a necessary thing that when there is inflammation of the stomach, or intestines, the tongue should be red, either generally or in any one spot, although it frequently is so. She said she had been ill just in the same way last year, and then the complaint continued for four months. Her face and breast were universally and deeply flushed.

She was presently cured by the most simple antiphlogistic treatment. I bled her to a pint, put her upon slops, and she took a dose of castor oil every day. That was the whole of the treatment; and from being exceedingly ill, she was perfectly well and presented on the 17th instant, having been here exactly a fortnight. There were no sudorifics given, no antimony, no mercury; nothing was had recourse to but starvation, one free bleeding till she fainted, which required a pint, and castor-oil every day.

Leucorrhœa.

There was likewise presented a case of *leucorrhœa*, which it may be useful to consider, as shewing that one kind of treatment is not required in every case of discharge from a mucous membrane. *Leucorrhœa* is very often a disease of mere debility, general de-

bility of the system, and particularly debility of the vagina, and perhaps of the uterus too; but it sometimes is attended with very considerable irritation—even inflammation of the vagina, and that inflammation will extend to the womb. Many cases of leucorrhœa begin as an active inflammation of the vagina, and it is impossible to distinguish them, as far as I know, from active gonorrhœa—perfectly impossible, only that you may, from the patient's situation in life, sometimes conceive gonorrhœa to be impossible. In this case I have no doubt that it was inflammatory leucorrhœa, for while the patient was menstruating, she was exposed to cold and wet.

The symptoms were, a frequent desire to make water; invariable relief upon making it; a bearing down, both forwards and backwards, and a profuse yellow discharge from the vagina. She had nausea, which is very common in all affections of the womb, and the catamenia had suddenly stopped. The hypogastrium—the whole region, indeed, below the navel, was excessively tender, and she was very costive. The state of the pulse, the pyrexia, and the pain, shewed inflammation to be present. The circumstance of the pain being greatly increased on pressure, immediately above the pubes, shewed that the inflammation was in the pelvis. The bearing down forwards and backwards shewed it was low down in the pelvis; and the profuse discharge which she had from the vagina shewed that the inflammation was in the uterus or vagina.

Notwithstanding this was a case of leucorrhœa, I had her bled immediately to twenty ounces; put her upon slops; a number of leeches were applied to the hypogastrium day after day, and she was purged regularly every day with castor oil. The leeches were applied twenty at a time, again and again. When all the inflammatory symptoms had been got the better of, (and some time after they appeared to have declined they again recurred with considerable violence, and leeches were again required) I had recourse to an injection, employing for that purpose the nitrate of silver, in the quantity of two grains to an ounce of distilled water. She was going on very well, but from catching cold there was again a bearing down, and tenderness on pressure, so that I found it necessary on the 4th and the 8th of this month to have recourse again to venesection. Thus I got rid of the inflammatory symptoms, and nothing but a profuse discharge continued. I had no hesitation in continuing the injection of the nitrate of silver, for it never gave her pain. The discharge lasted for some time, and I increased the nitrate of silver to three grains, from which she experienced no annoyance at all. After that she got up, and the discharge so much diminished, and she became so strong and well, that she did not

think it worth while to stay any longer, and she took a quantity of injection with her. I am quite sure that the nitrate of silver forms one of the best injections which you can employ in cases of this description; I will not say it is better than any other, but I am certain that it is as good as any, and better than many.

Rheumatism.

There was a woman also presented who came in with acute rheumatism and pain in the chest, particularly in the region of the heart, attended with dry cough. I had recourse therefore, not to local, but to general bleeding, in addition to which I exhibited colchicum, and she took half a drachm of the wine three times a day, and got well presently. The case, though very satisfactory, affords nothing new to you.

Bronchitis—Rheumatism.

There was a case, too, of bronchitis sent away cured in a man, and a case of rheumatism; but the only very important cases were the disease of the heart, the case of gastritis, and the case of inflammatory leucorrhœa.

MEDICAL GAZETTE.

Saturday, March 12, 1831.

"Acet omnibus, licet etiam mihi, dignitatem Artis Medicæ lueri; potestas modo veniendi in publicum sil, dicendi periculum non recuso."—CICERO.

OUTRAGE AT THE COLLEGE OF SURGEONS—SUSPENSION OF THE LECTURES.

On the disturbance—we might, without exaggeration, say riot—at the College of Surgeons, which it is this week our painful duty to record, we shall make but little comment. The simple narrative of events speaks for itself, and tells a story of disgrace which will be read with shame and mortification by all who have the respectability of their profession at heart—by all who prefer order to confusion, and decency to outrage—by all professional men who think too highly of themselves and of their calling to behold, without pain, the theatre of the College of Surgeons converted into a scene of the most disgraceful tumult; where demagogues assume the charac-

ter of English surgeons, and setting at nought all the observances we are accustomed to respect, convert the lecture-room, hitherto devoted to the purposes of science, into an arena for the display of the wildest passions. We wish to speak, not of the individuals, but of their acts: our opinion of the principal promoter of these scenes of tumult has often been expressed, and need not now be repeated. It is not the infamy of the man, but the atrocity of the deed, to which we wish to direct attention.

If the members of the College have any thing of which to complain, let them meet and make their grievance known; but let this be done at proper time and place—let it be done by those really composing the highly-respectable body of men who constitute the surgeons of this great metropolis; and let some man who is actually a practitioner, known and acknowledged as such, take the lead—who, by the strength of his own character, may give some degree of weight to the proceedings;—let this be done, and we shall be the first to support the members in the acquisition of any right, or the reformation of any abuse. But let it not be said that a few obscure individuals, with passions as ungovernable as the most infuriate rabble, and headed by an incendiary who has every thing to gain by notoriety, and nothing in the way of professional character to lose—let it not for shame be said that such men truly represent the surgeons of England. We challenge those who took part in the riot on Tuesday, to point out, among their whole body, one—even one solitary exception to our assertion—that they were persons whose names never were heard of before, unless as the immediate associates—the *confrères* (for that is the newly-imported term)—of him who contrives, and who enacts, these scenes of outrage for his own proper and individual gain.

So long as the President *is* President, he is entitled to respect, and will meet with it from any assembly whose members respect themselves. Yet here was the President of the College of Surgeons insulted in the most outrageous manner, and refused a hearing when he attempted to address a meeting of the members, to whom, as we are informed, he was about to relate the proceedings founded on the resolution he had previously received from them—to explain the circumstances which had prevented the Council from entertaining them, and to point out the manner in which the “irregularity” of their former meeting might be avoided. Such, we afterwards gathered, was the object of the President’s address, but not a syllable of which he was allowed to utter. In vain did he then attempt to persuade the members to let the business of the day proceed—“I beg—I entreat—I implore—(were his words) that you will not compel me to adopt stronger measures, for to these I must have recourse if you still persist.”

As to the President and Council, if they have any powers at all—if their laws be more than mere words, and their authority more than a shadow—every unprejudiced man must feel that they must either have acted as they did, or have relinquished the field entirely—have abandoned the President’s gown now and for ever to Mr. Wakley—and the mace to his “*confrère*.” But they chose rather to grapple with the chief rioter, and have him thrust out of doors by the peace-officers; and in doing this, they did their duty by themselves and the members at large. We have heard but one opinion expressed upon the subject, and that opinion is in approbation of this vigorous, but imperatively necessary, measure.

It has been said by Wakley, that Sir Astley Cooper, Mr. Lawrence, and Mr. Brodie, voted against the rejection of

his resolution as forwarded by his *confrère*. *This is not true: no voice was raised in favour of receiving the resolution—and Sir A. Cooper was not even present.*

The Council have done well, but they have not done enough. The name of every man who took a part in these disturbances ought to be expunged from the list of members, and advertised as such in the newspapers. So long as one is suffered to remain, he will be a nucleus for discontent to gather round, and his presence an insult to the other members. Neither let the Council, nor those members who were absent, be misled into the idea, that the sentiments of the agitator and his carefully-collected band, though most loudly expressed, were those of the meeting at large; so far otherwise, that during the period which intervened between the opening of the doors and the arrival of the lecturer, every time that the ring-leader or his *confrère* attempted to speak, their words were instantly and completely drowned in the groans, and hisses, and clamour, that ensued. Fain would they have charged these deafening proofs of disapprobation on those who were not members, and charged several individuals with being "visitors," who instantly denied the accusation.

Either the Council have the power to prevent the lectures from being interrupted, and discussions on the business of the Lord Chamberlain's office substituted for them,—or they have not. If they have such power, it behoves them to enforce it; if they have not, then the sooner the doors of the College are shut the better. We do not, however, by any means disapprove of suspending the lectures for a time, but the suspension ought not to be longer than is just sufficient to let the delirium subside. It is necessary for them to keep in mind that the lectures *must be delivered*, otherwise they violate

the condition on which the grant of money they obtained was given; and by an application at the Home Office, means of maintaining order against any attempt that Wakley or his satellites could make, would instantly be placed at their disposal. But the matter will probably be brought to speedy issue; for if an action can "lie," as a matter of course Wakley will bring it. He said he would do so, when he was dragged out; so did his unhappy protégé, Lambert, when he was ejected from the Westminster Medical Society by police officers in a somewhat similar manner; but the action was heard of no more, and we are not without fear that such will be the fate of his master's threat also. To suppose that the Council do not possess the power to have any member forcibly turned out who disturbs the business of the day, is downright nonsense. Every step was taken under the guidance of Mr. Wilde, the law-adviser of the College, who was present; and the charge of "illegality" is a mere bravado of Wakley's, to throw dust in the eyes of the blockheads who follow him, and encourage them to violence equal to his own.

Before we conclude, let us again protest against being supposed inimical to the members of the College of Surgeons, as a body, expressing their opinions, and enforcing their rights, in every legal manner—what we object to is, that a few turbulent individuals, with no claim to be heard but that derived from the strength of their lungs, should be suffered in the public eye to represent so important a branch of the profession, merely because the distinguished, influential, and numerical portion of the members, do not like to expose themselves to the fatigue and trouble of being bearded and insulted by those who make a business of attending the lectures at the College, whenever Wak-

ley advertises that he will entertain them with a "row." If this state of things be allowed to continue but a little longer, the degradation of the surgical profession, already so deeply disgraced by numbering Wakley among its members, will speedily be consummated.

But we would remind those not utterly blind to reason, that there are certain persons and things which, in this country, require to be spoken of with reservation. The words used in reference to the King, taken in conjunction with the tone and manner of giving them utterance, constituted an attack upon the character of the Sovereign, such as few men would venture upon even in the tumult of passion. *To charge the King personally with having inflicted an injury—to refer to him by name, and taunt him in terms of the bitterest irony*—is not only an outrage upon all decency and taste, but borders too close on treason to be altogether prudent, and we recommend to the most devoted admirers of misrule to be careful how they imitate, in this respect, the example of their oracle. (See report, page 765).

As to the cause of the naval surgeons, which has been made a pretext—and a very hollow one it is—for these disgraceful proceedings, it is quite apparent that it cannot but be injured by them in the most serious manner. We alluded in a former article to certain arrangements then in progress, which would remove the naval officers from the influence of a regulation which had not been made with reference to them: and we may now mention, that it has been in contemplation to make them commissioned officers; but we also know, that in a high quarter, and in reference to the former irregular proceedings at the College of Surgeons, it was stated as a reason against the government making the change at present, that "they must not even seem to be intimidated by a person such as he

who heads these meetings." Such being the case—and we pledge ourselves for the accuracy of our statement—our readers may judge how far the scene of Tuesday is likely to further the cause of those whose interests the parties profess to advocate.

ROYAL COLLEGE OF SURGEONS.

Tuesday, March 8, 1831.

Outrageous Disturbance in the Theatre— Interruption of the Lecture—Forcible Ejection of Mr. Wakley.

IN all our experience of public meetings and turbulent assemblies, it has scarcely ever fallen to our lot to witness one like that of to-day: such rout, riot, and confusion, in which the actors were entirely composed of persons who professed to be the members of a liberal art, we never before beheld. But it is our duty to confine ourselves strictly to facts.

Notwithstanding the publicity given to the order of the Council, that the doors should not be opened until a quarter to 4 o'clock, a crowd was gradually collecting, even from three, about the entrance in Portugal Street and in Lincoln's Inn Fields, until by the appointed time probably about from three to four hundred persons were assembled, a number far greater than the theatre could conveniently hold. The rush in consequence was tremendous, and the benches were instantly thronged. In a few minutes Wakley, the prime mover in the business, was recognized, and treated with hootings, cheers, and hisses, which continued—we cannot say how long exactly, for noise and uproar were the order of the day. The hisses evidently gave the agitator great annoyance, and his chief attention during the early part of the proceedings was engaged in endeavouring to fix upon the students and visitors the charge of being the inimical party. Several attempts were made by him, and his *confrère*, Mr. King, to address the throng, but the uproar and clamour—the renewed hootings and cheers, every time they did so, were too overpowering for them, and indeed bade defiance to any lungs. It was possible, however, now and then for those who were near Wakley, to catch some of the threats and denunciations that fell from his lips: we heard him distinctly say that until he was heard there should be

no lecture there. Thus passed the time until four o'clock.

At four precisely the President, Council, and visitors (among whom we observed Mr. Frankland Lewis, and Mr. Wilde), entered. The moment they made their appearance, the mingled noises of salutation were raised to the highest pitch. The President repeatedly attempted to address the meeting; but as this was found to be impossible, he pointed to the lecturer, who all-unmoved took his station at the desk, made arrangements for proceeding, and actually began his discourse; but further than from his gestures, and the moving of his lips, there was no clue by which one could guess what Mr. Guthrie was doing. The cries of "lecture," and "no lecture," were at this time predominant in the uproar, and Mr. Wakley could be heard facetiously to remark that the subject of the lecture was appropriate—for it was *rapture*. The President rose, and in the mildest manner possible, urged that the business of the day should not be interrupted: this he did repeatedly, and we could distinguish him using the expressions—"I beg—I entreat—I implore you to preserve order"—but it was all useless; Wakley was as repeatedly on his legs, attempting to address the Council, with "Mr. President and gentlemen," (cheers and hootings) "I hold in my hand," (cheers and hisses). Further than this he could not go. It was all in vain—it was only "confusion worse confounded."

At this stage of the proceeding as number of persons moved down from the members' seats to those reserved for the Council and visitors; and in manifesting their determination to support Wakley, did every thing but lay hands on the President. That officer was now heard to say that he should be compelled to have to resort to strong measures to secure tranquillity. Wakley was still on his legs, backed and encouraged by a band of noisy supporters. The Council evidently were reluctant to have recourse to harshness, except it became imperatively necessary. It *was* necessary—never was such a decisive step more imperatively required. Two or three police officers were sent up the benches to lay hold of the arch-disturber, and to remove him from the scene. The clamour was louder and louder still. A strong party rallied round Wakley, and offered every obsta-

cle to the officers, who seemed to be intimidated, and abruptly desisted, after having taken Wakley nearly to the door.

After about five-and-twenty minutes spent in this disgracefully uproarious scene, the President and Council retired; a circumstance which seemed to throw the rioters a good deal off their centre, for there was an immediate and sensible subsidence of the uproar; and this state of things was not a little aided by the entrance of a gentleman who, with his pen and note-book, seemed to take accurate cognizance of the proceedings. Nothing seemed to annoy the rioters more than this: one of them (Wakley's reporter) we heard wishing for stones to throw down on the "unknown." Wakley demanded frequently to know who he was—but at last pronounced him to be one of Gurney's short-hand writers. It was evident to the party now that they were not to have it all their own way, and the principal agitators set their heads together to organize some plan of operation. Wakley, in a quondary, inquired the hour, and, finding that it was but half-past four, intimated to those around him that they had better wait until five—that they had no *right* to act until after that hour had struck. But it was presently suggested by Mr. King that the lecturer had *signified his intention* not to lecture that day, and that, *therefore*, the theatre was disengaged and at their service.

We should have mentioned in its proper place, that, presently after the Council had withdrawn, Mr. Balfour, the Secretary of the College, entered the theatre, and delivered a verbal message from the President and Council: it was to the effect that all present should depart; but the derision and hooting with which the message was received could scarcely but be expected. Mr. B. accordingly made his bow, and hastily retired.

The suggestion of Mr. King was adopted, and the same gentleman got up to propose that the oldest member of the College present should be requested to take the chair. He named Mr. Staunton; but that gentleman declined the honour. Mr. Drew, the next in order of seniority, was then pitched upon; but he put in a decided negative to the motion, and refused to have any thing to do with the business.

A gentleman said that the chair should not be allowed to go a begging,

and advised that somebody should be proposed at hazard.

Mr. George Walker, a general practitioner, in Piccadilly, at length acceded to the wishes of the meeting, and was installed in the high honours of the chair—*by standing up on one of the top benches!*

Mr. Wakley now rose, and with his back to the chairman, began by observing that he had wished to put a question to the President and Council (who, he *regretted* to find, were now absent) to know from them, whether the letter which he held in his hand proceeded from them or not: it was signed by their secretary, it was true,—but a more extraordinary composition he had never read. He wished he could know the author—he would give him a handsome salary for the use of his talents (laughter.) Mr. W. then proceeded (*à la Cobbett-on-the-King's-speech*) to criticise the grammar of the letter, and certainly displayed very *curious* powers in the performance of the task: we regret that we cannot spare room for his critical observations. He at length came to the resolution which he had to propose. It was to this effect:—"That the Members of that College were filled with regret that the President and Council had sympathized so little with their feelings as to refuse to recognise the resolutions unanimously adopted by them on the 14th ult. on the ground of their irregularity, and that this conduct on the part of the President and Council was but one more proof of how little they consulted the honour, the happiness, and the respectability of the profession." The speaker then proceeded to make some remarks on the condition of the Navy Surgeons, and the hardship of their being excluded from court. "In war-time," said he, "in the year 1805, when their services were much wanted, by an Order of Council navy surgeons were put on an equal footing with captains in the army and lieutenants in the navy,—but now things are changed, they are thrown back strictly to the letter of their warrants, and excluded from court on precisely the same grounds as the carpenter, the gunner, the boatswain, the master, and the ship's cook. What a degradation is this, and how little was it to be expected at such a period! Even in the time of George the Fourth those gentlemen were admitted into the king's palace—but now that we have got

a sailor-king, (said Wakley, with a bitter sneer), *we see how sailor-surgeons are used*; why, they are only sneered at, scoffed at, insulted, and the palacedoors shut in their face." (Cheers.)

Here a gentleman, we believe Mr. Drew, said he wished to know by what authority Wakley was acting for the navy surgeons—whether he was doing so with their concurrence? Why, he wished to inquire, did not those gentlemen themselves come forward? Perhaps they would be but little obliged to Wakley, and the party present, for mooted their business!

Mr. Wakley replied, that he was sure he acted with the full concurrence of the navy surgeons; that he had that morning with him a navy surgeon, who was 18 years in the service, and who declared, that he dared not budge lest he should be struck off the list that moment. (Cheers.) The speaker resumed:—But the greatest insult of all was that which was offered to these gentlemen in the circular of yesterday's Council, wherein the very *discussion* of their wrongs was prohibited. The Council, however, should be made to know that this was the proper place for such discussion—the defence of the rights of their fellow-members being one duty of the members of that College; and this theatre belonged to the members. (Cheers.) The Council should be taught by him to know their own laws, of which they seemed to be as ignorant at present "as the table on which that young man is writing." (Laughter.) He went on to descant on the futility of the bye-laws of the College, for which he professed to entertain the most profound contempt. "*They* pretend to expel any one! they *dare* not do it. *They*, forsooth, deprive a member of his rights; they *say* they can. They will expel him, to be sure, and at the same time they like him so well that they make him pay ten guineas for getting rid of him!" (Immense laughter.) It was his wish to limit the proceedings of the day to the passing of his resolution; the further consideration of the affair of the navy surgeons he would rather defer till Thursday, when he invited the members to come again and meet him in the same place, when he would pass a vote of censure upon the President and Council of the College. (Wakley sat down amid the cheers and roaring of his friends.)

The resolution was put by the chair-

man, seconded by a Mr. Complin, and carried by a large majority.

Mr. King then rose, but was not long on his legs till he was called to order. He was proceeding to lecture the students of St. Bartholomew's, (many of whom he said he recognised among the oppositionists) upon the grossness of their conduct in hissing Wakley. "Did they want to cut their own father's throat?" But the orator was speedily silenced.

At this moment Mr. Balfour made his appearance with a paper in his hand: with it he strode up the benches, and presented it to Wakley. It was an order for him instantly to withdraw. Wakley was evidently puzzled how to act. He begged, he intreated Mr. Balfour, to wait for the answer of the meeting; but Mr. B. pursued his descent as rapidly as he had ascended, amid the deafening clamour of the assembly; and on reaching the floor, displayed (rather pantomimically) a placard, ordering, in the name of the President and Council, that the theatre should be cleared. The uproar was now tremendous. Wakley's summons was put into the hands of the chairman, to have the sense of the meeting upon it, whether it should be obeyed or not; when the agitator himself exclaimed, *con furore*—"thus—thus—(sitting down obstinately in his seat) thus I obey the order!" Then rising again with extreme violence of gesture, and loudness of tone, he moved his arm menacingly to all who were assembled around him, and bellowed, "Gentlemen, *if you do not resist this*, you deserve to be branded as the basest of slaves."

This was the crisis. The words were scarcely uttered when in rushed an irresistible file of able-bodied Bow-Street officers, who pushed straight up the benches to where the arch disturber sat. On their reaching Wakley, his partizans rallied round him, and a fierce struggle ensued. Wakley attempted to resist. Some of the officers seized him by the collar, while others tripped up his heels, and dragged him down, clinging to every bench as he passed, roaring for rescue in furious but impotent rage. The noise, confusion, and uproar, were now indescribable. It was quite a battle scene. Wakley's friends made every effort to aid their champion, but the officers were too numerous and too powerful to be denied, and every arm raised against them met from the batons such

striking arguments against their interference, that the resistance of the party was soon limited to cries of "rescue Wakley!"—"down with the officers!" &c. exclamations which those functionaries seemed to regard with extreme indifference. Down went the agitator in his horizontal course, rapidly enough, until he found himself at length on his legs at the council door; and through this last stage in his descent he was thrust with all convenient speed, in spite of struggles and every demonstration of furious rage. To hurry him through the house, and push him into the street, was but the work of a moment: and now that we have him there, we may pause a moment to describe how he looked on the occasion.

He was altogether a very extraordinary-looking spectacle: his dress deranged, his hair on end, his countenance whiter than ever, and his manner displaying the utmost excitement and agitation. He was soon surrounded by a parcel of his followers, and then turning to one of the officers, declared his intention of taking him (the officer) to Bow-Street, for an assault. Thither the group were moving, when they met with some of the metropolitan police; upon which Wakley gave the officer in charge, and the whole party proceeded together to one of the offices. But we must return to the theatre at Lincoln's-Inn-Fields.

A troubled calm for a moment ensued upon Wakley's abrupt removal. His party, however, were instinctively moving down the benches—the chairman was no where to be seen; and presently nothing was discernible but a turbulent crowd in the middle and lower parts of the theatre. "Let us go along with him!"—"let us not desert him in his difficulties," cried a few. At length Mr. King was observed to hold up a paper, which he attempted to read. As well as we could gather, this was a sort of resolution to appoint a deputation to wait on the Lord Chamberlain, or Lords of the Admiralty, in behalf of the naval surgeons, and that Wakley should be one of the number. This was put tumultuously, and carried; also a vote of thanks to Wakley, carried in the same way—neither, however, were put by the chairman, who had fled, and left but this riotous crowd behind him. "Now," said Mr. K., "I am satisfied; I can now go with confidence to my friend, the Duke of Devon-

shire, with whom I have the honour of being particularly acquainted, and I can tell him *all*." And presently he exclaimed, "this theatre is my home, and nothing but violence shall remove me from it." A person at this moment came hastily from the lower part of the theatre, and communicated something to Mr. King, which suddenly altered his intentions. At the same moment the police officers, who, it appears, had been instructed to clear the theatre, were seen entering at the lower doors; upon which, "Let us go—let us follow Mr. Wakley," was shouted forth by his *confère*, and a rush was made to the doors, the object now being to get clear off as fast as possible. The theatre was accordingly emptied in a few seconds, and its contents poured out upon the street. "Three by three," was the last word of command we heard issued; and when we reached the outer door we perceived a considerable body moving off in the direction of Bow-Street, but it was a disorderly, irregular body, a "rabble rout," and forming nothing whatever in the shape of a procession.

The whole scene was concluded at the College by half-past five.

After Wakley was turned out, as we have said, he accused one of the officers of assault, and gave him in charge to one of the metropolitan policemen. They went in a body to Bow-Street, where the officer who had assisted in expelling Wakley was discharged, and the policeman who had taken him into custody was reprimanded by the magistrate for having done so. Wakley then applied for a warrant against him, which was refused, and he left the office in great dudgeon.

We have seen in some of the papers the most inaccurate, exaggerated, and absurd accounts of the above proceedings. In one of them it is stated that Wakley's dress, even to his shirt, was "torn to ribbons,"—absolutely "to rags." This is wholly false; no more force was used in his removal than his kicking and struggling rendered unavoidable. His waistcoat was open and unbuttoned when he made his sudden appearance in Lincoln's-Inn-Square, and his hat was off; but this last was speedily handed to him, and as to his clothes they were not torn at all. The explanation of these statements is simply this: Wakley's reporter, trained by him

for the purpose, and made a member of the College of Surgeons, is also a reporter to the daily press. It was this person who regretted that they had no stones to throw at the reporter introduced by Mr. Wilde to take notes of the proceedings, after the President and Council retired.

POSTPONEMENT OF THE LECTURES.

A NOTICE has been issued informing the members of the College of Surgeons that the Lectures are for the present postponed.

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

LONDON HOSPITAL.

Epilepsy, with Aura—Cured.

HENRY PIG, æt. 20, a hawker of fruit, of a dark complexion and slight frame, was admitted into the London Hospital on the 20th November. He says that his habits have always been regular, and has abstained from ardent spirits. He attributes his present illness to a fall in the street, about the middle of August, by which his head, and the right side of his body, were severely injured. After the accident he was immediately attacked with vertigo and head-ache, and fits came on in about three weeks after, which now occur sometimes once or twice a week, and sometimes once every four-and-twenty hours, for several days in succession. The fits are preceded by an aura, which, commencing about the centre of the right foot, rises gradually upwards, and in about ten minutes reaches the head, and then the violent symptoms commence. The fits last, in general, about five minutes, during which time he is perfectly insensible. After the attack has passed off, he remains in a very weak state, with vertigo and headache, and for a short time the extremities of the right side are without sensation, but gradually return to the natural condition. Pulse 98, and small; bowels regular.

Hirudines, x. temporibus quotidie.

Calomel c. Jalap, grs. xv. p. r. n.
Middle diet.

24th.—The headache and vertigo have been much relieved by the leeches.

A ligature is to be applied under the right knee on the approach of the aura.

Rept. Hirudines.

28th.—A fit has been prevented by the ligature, and the aura has now left the right

leg ; it commences at the right shoulder, and shoots down to the fingers. Headache continues ; bowels open.

V.S. ad \S xvii. ex. Brachio dextro.

Dec. 5th.—Several fits have been checked by the ligature applied above the elbow-joint ; complains to-day of darting pains in the right arm and hand, which are very sensible to cold. One motion daily.

8th.—No fit since the last report. Pulse 88 ; bowels open.

V.S. ad \S xvj. Capillit. abraso. applic. Ung. Ant. Tart.

19th.—The eruption has appeared on the head from the ointment ; has not had a fit since the 11th ; feels much better ; the pains are now confined to the back of the right hand. Pulse 98 ; two motions daily ; tongue clean ; appetite good.

Perstet.

Jan. 2d.—Only one fit since the last report ; feels better.

8th.—Had a fit this morning, preceded by pains commencing in the right arm and shooting down to the fingers ; the fit is described not to be so long or so severe as those with which he had previously been attacked. Appetite good ; tongue clean ; pulse regular ; bowels open.

Emp. Lytta carpo dextro.

23d.—Has not had a fit since the last report until this morning, which was not preceded by any aura or shooting pains.

Ferri Carbonas, \S ss. ter die.

Omitt. alia. med.

30th.—Had a fit this morning, which lasted about half an hour. Appetite good ; tongue clean ; bowels open ; pulse regular.

Ferri Carbonas, \S j. ter die.

Vesic. nuchæ.

Feb. 12th.—Had a fit on the 7th, and one this morning ; the former lasting about ten minutes, the latter about twenty minutes.

V. S. ad \S xiv.

Cont. Ferri Carbonas.

14th.—Was relieved by the venesection ; now complains of pain and a sense of weight at the back of the head.

C. C. nuchæ ad \S xvii.

Liq. Arsenicalis, \mathcal{M} vj. ter die.

Omitt. Ferri Carbonas.

24th.—Has had no fit since the last report. Appetite good ; pulse 96 ; tongue clean ; bowels opened two or three times daily

Perstet.

No fit having come on for eight days after

the last report, and his general health being good, this patient, at his own request, was allowed to leave the hospital.

Continued Fever.

Robert McMinning, æt. 29, a coal heaver, was admitted into the London Hospital on the 19th of February, under the care of Dr. Billing. He states that he has been ill since the 16th, when he was attacked with vomiting ; but that, for a few days previous, he had cough, with hurried respiration, and had been told that during the last two nights he had been incoherent. He now complains of great debility, of feeling confused after a fit of coughing, which produces some pain in the right hypochondrium ; of loss of appetite, and great thirst. He has the vesicular eruption of catarrh about the lips, which he says has continued about two weeks. Pulse 108, and hard ; cough without expectoration ; skin perspiring ; eyes suffused ; lips of a slight purple colour ; tongue white ; bowels regular from medicine taken before admission.

V. S. ad \S xvj.

Mist. Ant. Tart. \S ss. om. hora. Magnes. Sulph. \S ss. statim et repet. alt. horis, donec alvus soluta fuerit.

20th.—Slept well last night, and says he is better to-day. The cough still produces confusion of head ; ten leeches were applied to the temples this morning, and produced relief. The medicine having produced much sickness, he was ordered this morning to take it every two hours. Eyes less suffused ; pain in the right hypochondrium on coughing ; pulse 108, and soft ; bowels freely opened by the mixture.

Lotio frigida temporibus. Emp. Lyttæ Hypochon. dextro. Cont. Mist. Ant. Tart.

22d —Feels much better to-day. Cough less troublesome, and no confusion of head ; very little pain in the right side ; pulse soft ; tongue cleaner ; bowels open.

Perstet.

23d.—Feels weaker to-day ; less cough ; no appetite ; less thirst ; tongue furred in the centre ; skin soft and cool.

Omitt. Mist. Ant. Tart. Infus. Gent. Comp. ter die. Cal. c. Rheo, \mathcal{O} j. alt. auroris.

24th.—Is much better ; strength improving ; has felt an appetite this morning for the first time. Pulse soft and natural ; tongue clean.

25th.—Continues improving rapidly ; appetite good ; bowels open.

26th.—Convalescent ; to have animal food.

March 3d.—Discharged cured.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

SATURDAY, MARCH 19, 1831.

MEATH HOSPITAL, DUBLIN.

CLINICAL LECTURE

DELIVERED BY DR. GRAVES.

Two cases of Cerebral Disease terminating fatally—the Pathology of Brain Affections obscure and difficult—Consequent importance of guarded treatment and prognosis—the opinions of Rostan, Lallemand, and certain other writers on the subject, rather immature and presumptuous—Value of Morbid Anatomy as illustrative of Diseases of the Brain.

GENTLEMEN,—Two persons labouring under severe cerebral disease, admitted lately into the same ward, presented a striking contrast between the symptoms by which each respectively was accompanied; in fact, so completely did these cases differ in their duration and history, that they scarcely resembled each other in any thing but their fatal termination; and it was consequently expected by all who had watched their progress during life, that an examination of the brain would detect lesions of that organ as different in their nature as had been the symptoms which they had occasioned.

Such, I confess, was my own opinion, and such was the opinion of many others who have no little experience in pathology. The result, however, differed widely from our expectations, and is therefore well worthy of your attention.

As this result is in direct opposition to our preconceived opinions concerning the origin and causes of some of the most serious derangements of the cerebro-spinal functions,

172.—VII.

I must, gentlemen, trespass on your patience, while I lay before you the particulars of these cases, and the lesions observed on dissection; after which we shall compare them together, and consider what pathological and practical inferences may be drawn from them. I am the more anxious to draw your attention to this subject, because many late writers on diseases of the brain affect an accuracy of diagnosis which I have found unattainable in my practice. Numerous cases, it is true, are cited by each of these authors, and are so arranged and classified that the conclusions seem to be arrived at by a perfectly fair induction, and of course command our assent, on the strongest grounds, the evidence of facts. It is to be feared, however, that these facts have been too frequently warped to suit preconceived pathological arrangements, apparently founded on the basis of morbid anatomy; and I am inclined to think that a more unbiassed observer will find little cause to join the ranks of those who claim for this department of medical science a degree of accuracy almost equal to that which the unrivalled discoveries of Laennec have enabled us to attain to in the diagnosis of pectoral affections. To prevent the suspicion of having accommodated the history of these cases to any opinion of my own, I shall read them out from the case-book.

“Patrick Kearney, aged 40, admitted October 6th.—Has always enjoyed good health, with the exception of being subject occasionally to ill-conditioned ulcers. Three months ago, after having been subject to very violent vertigo for some time, he was attacked by slight hemiplegia of the left side, from which he recovered in three days. The ver-

3 D

tigo, however, continued, and in walking, he consequently frequently staggered, and sometimes fell, but did not become insensible, and on such occasions, he was able immediately to rise from the ground without assistance. Three weeks ago he again lost the use of his left side in the evening, and says that this attack was not preceded by headache. His left arm has lost the power of motion, but not of sensation. The forearm is flexed on the arm, the fingers on the hand, while the latter is bent towards the forearm. Extension of these parts could not be effected even by the application of considerable force, and every such attempt appeared to give him pain. This flexed state seemed to arise from a permanent tonic spasm affecting the flexor muscles of these parts; and it is remarkable that it continued even when the patient was asleep. He has occasionally great trembling in this limb, but no pain. The left lower extremity is less engaged; there is no flexure, and but little trembling. Pulse 92, full and soft; other functions natural. His disease underwent no material alteration until 11 o'clock in the forenoon of the 15th October, when his respiration became suddenly stertorous, and his eyes fixed. The stertor increased, and in about ten minutes he became quite comatose, having lost all power of sense and motion, and his limbs were stiff. This fit lasted about half an hour, and on its subsiding, he recovered his consciousness perfectly, but his voice was very obscure, and his articulation difficult. His whole frame, too, continued to be agitated by a nervous restlessness and tremor. In the evening he had another fit, which was not so severe as that of the morning. During the night he did not sleep a moment, but constantly cried aloud, so as to disturb the other patients, and was perpetually agitated and restless, making frequent attempts to leave his bed. At 8 A.M. on the 16th, the hemiplegia was observed to be increased, while the tonic contraction had extended to the left lower extremity. During the visit, a continued shivering affected him generally, but it seemed greater on the affected side. This rigor soon subsided. Although so agitated and restless, and although he was constantly crying out in an incoherent manner, as if from pain, yet when spoken to, he answered

in a perfectly rational manner, and said he had no pain in the head, nor did he lose his intellect or speech until the very moment of his death, which took place about noon on the same day. During the time which intervened between the first fit and his death, the pulse and heat of skin are noted to have continued as before.

“ Examination of the Body 18 hours after Death.—Cadaveric stiffness inconsiderable; contraction of the left leg resolved, that of left arm remains with considerable stiffness. The vessels of the scalp contained but little blood, but on opening the cranium, the sinuses of the dura mater were found much distended by fluid black blood. The vessels of the pia mater exhibited an intense congestion, being every where distended with dark coloured blood. No blood was extravasated on the upper surface of the brain, neither was there any where a trace of subarachnoid serous effusion, or of puriform matter, coagulable lymph, &c. At the base of the brain, a stratum of extravasated blood, in some parts very thin, but in other places two or three lines in thickness, was found at both sides of the *pons*, and occupying all the space between it and the commissure of the optic nerves; coagulated blood also existed in the fourth ventricle, and passing by the *iter*, it so exactly occupied the third, and both lateral ventricles, that when extracted, the coagula appeared like casts of these cavities. It is to be observed, however, that the blood so effused into these cavities, by no means considerably distended them. A pretty accurate idea of its quantity in all may be formed from the fact, that in each of the lateral ventricles the coagulum, in size and shape, resembled a leech of the ordinary size, when about half filled by sucking. No rupture of the basilar or other arteries could be found; but on examining the structure of these, and the neighbouring arteries, forming the circle of Willis, the following diseased state of their parietes was detected. The thickness of the arterial tunics was increased, and the three coats were separated from each other by cellular tissue, loose and friable in its texture; in fact, the connexion between these coats was but trifling, and with a little care, the middle or elastic tunic could be drawn out from between the others in the form of a hollow cylinder. Between the middle

and internal tunics were several patches of white opaque matter, but as yet no ossific deposition. A most minute and careful examination of the brain, cerebellum, medulla oblongata, and about one inch of the cervical spinal marrow, was next made, but not the least morbid alteration—not the least change in consistence or colour—or, indeed, in any other particular from the healthy state, could be any where detected. Thoracic and abdominal viscera healthy.”

Before I make any remarks on this curious case, I shall read you the particulars observed during the illness of Joseph Murphy.

“This young man, aged 18 years, was admitted on the 5th of November. He was a shoe-maker’s apprentice, and had, until the commencement of his present illness four weeks ago, always enjoyed good health, with the exception of an incontinence of urine, which he attributed to the cruelty of his master, who only permitted him to leave his work at certain times, in consequence of which he was unable to relieve his bladder as often as nature required. About a month before his admission, having been much exposed to damp and cold air, he observed his abdomen to swell, and become painful on motion, particularly on stooping. Within the last eight days these symptoms have been much increased; purging has supervened, and he has been attacked by an acute pain in the left hypochondrium, and such a degree of debility that he is compelled to abandon his occupation.

“November 6th.—Abdomen considerably swollen; the swelling appeared to be rather the consequence of a tympanitic distention of the intestines than of dropsical effusion; no part of the abdomen was tender on pressure except the region of the spleen, which was obviously much enlarged. He described himself as affected with a pain which shot across the epigastrium from one hypochondrium to the other, and rendered stooping at his work extremely distressing. The patient was considerably emaciated; appetite good; somewhat thirsty; tongue red and dry; bowels free, two or three stools being passed daily; no tenesmus; involuntary discharge of urine; no pain or tenderness in the region of the bladder; pulse 120; sleeps well; has no pain in the head; no derangement whatever of cerebral or respiratory func-

tions; his eyes are suffused, but not weak or sore. Twenty leeches were applied to the epigastrium, and he was put on low diet.

“November 7th.—Nurse states that he continued without any alteration in his symptoms until yesterday evening after supper, when becoming very drowsy, he went to bed, and fell into what she thought was a natural sleep. This morning, however, she became alarmed at finding that she could not awake him. He is now lying in a state of deep coma, and constantly tosses his head from side to side on the pillow; the eyes are suffused; the pupils dilated, and totally insensible to light; there is slight strabismus of the right eye. Skin warm; pulse 120, hard, and somewhat full; a râle is audible in the trachea. A vein was immediately opened, but when about three ounces of blood had been taken, the pulse became very weak, and he appeared so sunk that no more blood was drawn. The pulse shortly after regained its strength, and the tracheal râle ceased. An injection of several pints of warm water was carefully administered by means of Read’s syringe, and brought away an enormous quantity of hardened feces. In two hours a turpentine injection was ordered. In the meantime his head had been shaved, and was kept constantly wet with towels dipped in cold water, while the actual cautery was applied to the nape of the neck, and a scruple of calomel was given, to be followed in the course of the day by a draught, containing castor oil and spirits of turpentine, for the purpose of removing or diminishing the tympanitic state of the belly, which still persisted. None of these measures afforded him the least relief. The draught was no sooner swallowed than it was rejected, and the application of the cautery roused him but for a few minutes, after which he again became comatose. In the evening he had a severe fit of screaming; his pulse rose to 140, was somewhat full and hard; and his death, which took place at nine o’clock that evening, about twenty-six hours from the first appearance of the cerebral symptoms, was preceded by two or three slight convulsive fits.

“Dissection 12 hours after Death.—*Head*: There was no congestion of the vessels of the scalp; on removing the calvarium, the sinuses of the dura mater were found gorged with black blood,

mixed with small quantities of fibrine, deprived of colouring matter. No fluid was found between the visceral layer of the arachnoid membrane and the convex surface of the brain, and not more than a teaspoonful at its base. The pia mater was excessively congested, its larger veins gorged with black blood, and their smaller branches, similarly distended, formed numerous ramifications over that membrane. In the ventricles of the brain was a small quantity of serous fluid, and a little in the third ventricle, but the quantity of serum so effused was too inconsiderable to be considered as a morbid product. The substance of the brain and cerebellum was perfectly healthy in every respect. In both this and the preceding case the brain, when cut, exhibited numerous red points, but not more than are frequently seen on the section of a perfectly healthy brain.

“*Thorax*.—Nothing remarkable, except a considerable engorgement of the posterior portion of both lungs, owing partly to cadaveric gravitation, and partly to the effect of gravitation during the long agony preceding death. This, from affording a crepitating râle before death, and from its rendering the pendulous portions of the lung impervious to the air, Laennec has termed the *pneumonia of the dying*, a term by no means applicable, for pneumonia renders the pulmonary tissue impervious, in consequence of an exaltation of the vital powers of the affected part; whereas, in the impervious pulmonary tissue just spoken of, this state arises from a decrease—a gradual cessation of the vital powers, which permits the vessels to allow the blood, in obedience to physical laws, to accumulate in the most depending part.

“*Abdomen*.—The large intestines were flaccid and empty, and lay concealed beneath the stomach and small intestines, both of which were excessively distended with air, and presented on their serous surface the appearance of intense venous congestion; the veins every where gorged with dark blood, were injected with this fluid to their ultimate ramifications. There was a considerable congestive redness in the mucous membrane of the stomach, and that of the small intestines was throughout their whole extent of a slate colour, evidently produced by its state of sanguineous engorgement during life; the most pendulous portions of the intestinal loops

were red, and still more congested, in consequence of *postmortem gravitation*.”

Having thus put you in possession of the symptoms and postmortem appearances observed in these two cases, I shall now, gentlemen, proceed to compare them together, and afterwards examine them with reference to the opinions expressed by the latest writers on diseases of the brain.

In the first place, no two cases could possibly differ from each other more than these, in their duration, general history, and individual symptoms. In one, coma suddenly supervened without any previous warning, and persisted until death, accompanied by dilatation of the pupils, and insensibility of the retina to light. Here the derangement in the sensorial functions was quite unexpected, and there were neither hemiplegia, tonic spasms, rigors, nor successive fits of convulsion, which were the very symptoms that in the other case constituted the chief features of the disease. In the other case, too, were absent the uninterrupted state of coma, the contraction of the pupils, and the insensibility to light. The state of the mind in each was strikingly different; in the one, being as it were annihilated from the very commencement, while the other patient answered questions rationally to the last. In the old man, the cerebral affection had subsisted for several months; in the young man, it had proved fatal in twenty-four hours.

Having formed a general comparison between the symptoms of these two cases, can we in the lesions observed in the examination of the brain, detect the causes of the numerous and striking differences just enumerated? Most certainly not, for the morbid appearances were exactly the same in both, if we except the blood effused on the base, and in the ventricles of the old man's brain. Arguing from the generally received ideas concerning the effects of such an effusion of blood, its detection in these situations would undoubtedly lead the morbid anatomist to conclude (had the bodies of both these patients been presented to him for examination) that the man in whose brain this effusion had occurred, must, during life, have been much more likely than the other to present such symptoms as permanent coma, dilatation of the pupils, insensibility of the retina to light,

&c. In fact, it is quite obvious that the postmortem appearances would mislead him, and that the history of the cases thus formed would be extremely incorrect—symptoms being attributed to one which had only been displayed by the other. I do not mean to assert that morbid anatomists have not long ago observed that coma, dilatation of the pupils, &c. may occur without effusion, or that effusion may exist without having occasioned these very symptoms. Still, however, it cannot be denied that the cerebral mass and membranes being found in every other respect in exactly the same state in two cases, an effusion of blood on the base, and in the ventricle of one, being superadded to the appearances observed in the other, would be considered as constituting an important difference, increasing the probability of the occurrence of coma, &c. during the life of that patient. The cases just related exhibit striking exceptions to the justice of such a mode of argument.

Let us next, gentlemen, compare these cases with the opinions recorded by authors concerning the lesions connected with certain symptoms.

No proposition seems more universally allowed by those who profess to reduce cerebral diseases to a classification depending on evident alterations of structure, than that paralysis of one side of the body always arises from a local affection of the opposite hemisphere of the brain. This affection may either consist of an effusion of blood, a *ramollissement*, or the pressure arising from a tumor, &c.; but in all cases it is assumed that hemiplegia must be attended, and caused, by some such local and evident alteration. On the other hand, general paralysis, affecting alike both sides of the body, is caused, according to most authors, by a general derangement of the cerebral circulation, usually called congestion, and believed to act equally on both hemispheres. The latter species of paralysis may arise suddenly, and may be as suddenly relieved, as it ceases when, by means of venesection, we succeed in removing the congestion that produced it.

An unbiassed attention to facts will, I think, prevent us from giving our assent to either of these propositions. In the first place, we often, in dissecting the brains of hemiplegic patients, find both hemispheres, so far as evident alterations

of structure, affected exactly in the same way. This was remarkably the case in Kearney; there was no alteration in one hemisphere which did not exist in the other, and yet this man had complete paralysis of one side. It is in vain to assert that some alteration of structure existed, but escaped our notice, for both myself and those who assisted in the dissection were too familiar with diseased appearances, and too careful in conducting the examination, to allow any difference in one hemisphere, as compared with the other, to escape notice. In the next place, it is by no means an unfrequent occurrence to meet with patients who, being suddenly attacked with symptoms of general determination of blood to the head—such as headache, *trinitus aurium*, vertigo, are rendered for the time more or less completely hemiplegic, and yet recover in the course of a few minutes or hours the use of the affected side so suddenly and so perfectly, as to preclude the idea of a local lesion, such as could be detected by the scalpel of the anatomist. Of this I have seen several instances, both in hospital and private practice, and which I cannot reconcile with the doctrines laid down by Rostan, Lallemand, and other authors.

To quote one of the many examples I myself have seen:—A man named Thomas Lynch was admitted into Sir Patrick Dun's Hospital, afflicted with symptoms indicative of cerebral disease. During his residence in the hospital, he suffered four or five attacks of hemiplegia, in every respect complete, and depriving him of the use of his speech. Some of these attacks lasted only fifteen minutes, while the longest continued about an hour and a half; they ceased as suddenly as they had commenced, and left no traces of hemiplegia behind them.

The circumstances of this case evidently prevent us from assigning each attack to a separate effusion of blood; for, were it owing to this cause, it would be impossible to account at once for the sudden appearance and as sudden cessation, of so extensive and complete a paralysis.

Again, I have carefully watched the progress of several cases, which after months and years have finally terminated in hemiplegia, the super-vention of which I had anticipated from the patients having remarked to

me, that, although otherwise in good health, they had more than once observed, when fatigued by exercise, that they felt a degree of weakness in one leg, the motion of which, so long as this feeling continued, they described as slightly approximating to the dragging of a half-paralysed extremity. In some this feeling was accompanied by a scarcely-observable thickness of speech, and a certain confusion of mind, all of which subsided shortly on their taking rest. These persons usually complained at the same time of numbness in some part of the affected extremity, and which numbness not unfrequently was the sole symptom of these transient warnings. The remark already made with regard to Lynch's case applies still more strongly here; and since the hemiplegia, when it did supervene, always affected the side in which these premonitory symptoms had been felt, we can scarcely avoid attributing both to the operation of causes the same in nature, but differing in degree.

Many, I am aware, would account for the transient attacks by supposing that each was preceded by a very small effusion of blood in the opposite hemisphere of the brain, and that the final complete hemiplegia was owing to a similar, but more copious effusion. I am ready to admit the truth of this explanation in those cases where there have been several distinct attacks of paralysis, differing in intensity, all affecting the same side, and all lasting several days, or even weeks, and then *gradually disappearing*. Instances of this kind are frequent, and in such it is not unusual to find traces of those successive extravasations of blood which had caused the series of paralytic attacks; but the comparatively longer duration, and the gradual cessation of such attacks, sufficiently distinguish them from the affections above spoken of, and which are too sudden in their disappearance to admit of a similar explanation. The manner in which the arteries of the brain communicate together renders it more difficult to conceive how local determinations of blood could occur in this organ. Still, however, such an occurrence is by no means impossible; and did it take place, it would account for the phenomena observed. Thus, were the right side of the brain to become congested, a sudden attack of hemiplegia of the left side

of the body would be produced suddenly, and would as suddenly subside on the removal of that congestion. When the congestion is violent, and affects the whole hemisphere, the paralysis will affect the whole of the opposite side, and will be intense; when, on the contrary, the congestion is inconsiderable, or else confined to particular portions of a single hemisphere, the paralysis will be in proportion less severe and less extensive. This explanation * does not appear to me inconsistent with the laws known to regulate the circulating system in other organs, for it is by no means unusual for parts deriving their blood from one common artery, to display occasionally very different degrees of sanguineous congestion, a circumstance only explicable on what appears a very tenable hypothesis—an active participation on the part of the smaller vessels and capillaries in the process by which every part of the body is supplied with blood. I am aware that the ancient doctrine, which attributes the distribution of blood to the sole agency of the *vis-a-tergo*, has been lately advocated at great length, and with considerable ability, by Wedemeyer; but, did time permit, I think I could almost demonstrate the correctness of the opinion, which assigns to the capillaries and smaller arterial ramifications a considerable share in the distribution of blood, both in health and disease.

Another mode of explaining the occurrence of such attacks as I have described, is to suppose that they arise from a mere functional derangement, more or less intense, of the whole or a portion of one cerebral hemisphere. This explanation would certainly account for the sudden appearance and cessation, as well as for the short duration, of such paralytic affections; but I do not feel inclined to adopt it, because they are invariably accompanied by other symptoms denoting determination to the head; and also, because sooner or later they usually terminate in actual extravasation of blood in the side of the brain opposite to the side of the body affected by these transitory attacks. Whatever mode of ex-

* Rostan has advanced this explanation under the head of "*Congestion cérébrale locale*;" but he does not attempt to account for the manner in which these local affections are produced, nor does he sufficiently dwell on them as the frequent precursors of paralysis from extravasation on the side of the brain most prone to these local congestions.

plaining the occurrence of these latter be adopted, it is important, gentlemen, to recollect that whenever they are observed, the medical attendant must be on his guard—must warn the patient's friends of his future danger, and must endeavour, by the most suitable means, to avert the tendency to cerebral congestion, and its consequence, extravasation. It is to be regretted that the latter is too often inevitable; such cases, in persons past the prime of life, being usually attended by an alteration in the texture of the arteries of the brain, disposing them to rupture.

The state of these vessels in Kearney was worthy of attention, as the existence of three coats or tunics, which some have denied to the cerebral arteries, was here demonstrated. Another symptom—tonic spasms of the affected side, formed one of the most remarkable features of this poor man's disease, and, combined with the hemiplegia, seemed to furnish indisputable evidence of some local affection of the opposite side of the brain, and yet none such was detected; the congestion of the pia mater was intense on both sides, although somewhat greater on the side opposite to the paralysis. The difference, however, was inconsiderable, and might have been occasioned by the position of the head shortly before or after death. I do not say it was so, for the position was not observed, but I mention this explanation to impress on your minds how trifling was that difference. Here, then, is a second instance of an affection permanently confined to one side of the body, without any lesion to account for its being found in the opposite side of the brain,—a fact at variance with the testimony of several systematic writers.

The tonic spasm of the paralysed extremities requires notice in another point of view, as constituting one of the chief symptoms characteristic of *ramollissement*, or at least that state of brain which finally ends in softening. The absence of any local cerebral affection in Kearney, in whom this symptom had been during life so remarkably developed, is conclusive in proving that even its most extreme degree may be excited by some other cause*. The same re-

mark applies to head-ache, the tingling and spastic pains of the affected limbs, the paralysis, and in fact to each of the whole group of symptoms which are said, when combined with the tonic spasm, to constitute indubitable evidence of *ramollissement*. I do not deny, that when associated together in the order described by Lallemand and Rostan, they afford very strong evidence of that lesion, but this I will assert, that I have met with several cases in which, after a careful comparison of the symptoms with the descriptions of these authors, I was induced to make the diagnosis of *ramollissement* with considerable confidence, and yet, as the result proved, erroneously. Had such mistakes occurred in my own practice only, I might possibly have believed that I had not rightly understood these celebrated pathologists, but I have witnessed similar errors committed by others so often, that I am rather inclined to doubt the general applicability and correctness of the rules laid down for recognising this lesion.

Let it not be imagined, however, that I wish to throw doubts upon the beneficial influence of morbid anatomy on the diagnosis and treatment of diseases of the brain,—far be from me any such intention; my object in making these observations is not to retard, but to advance, the progress of morbid anatomy, by pointing out the errors of some generally-received opinions, and thus opening the way for a renewed and unprejudiced examination of the subject. It may, indeed, be *à priori* expected, that of all organs, the cerebro-spinal system must give rise to the greatest number of diseases which, without much impropriety of expression, may be termed functional, being of such a nature as to be unaccompanied by sensible changes in the matter of the diseased tissue, and consequently not entering within the province of morbid anatomy. We all know that *tetanus* may be artificially

In the affected limbs is also a frequent occurrence, and rigid contraction (tonic spasm) of them has been much insisted on as a symptom characteristic of *ramollissement*. It is, however, by no means a uniform symptom, for it is frequently wanting altogether: when it is present in the early period of the disease, it frequently disappears in the course of it; and in some of Rostan's cases it left the limbs of the paralytic side and affected those of the other. *It is also frequently observed in cases entirely of another kind, as in certain states of fever which terminate favourably.*"

* Dr. Abercrombie, whose *Researches on Diseases of the Brain* I recommend to students, as by far the most trustworthy treatise yet written on the subject, fully bears me out in this assertion. He says, talking of *ramollissement*, "pain

produced by irritation of the spinal cord, and consequently that inflammation reaching that part often occasions this disease. So far we obtain from morbid anatomy useful knowledge concerning the nature and treatment of certain cases of tetanus; but do we advance or retard the progress of this department of medicine by asserting, that inflammation of the spinal cord exists in every case of tetanus? So it is with those who, affecting to account for all cerebral diseases by lesions observed after death, have excited expectations in the student, which, not being in every case fulfilled, he is tempted, in disgust, to abandon all further investigations on the subject.

No other organ of the body, in the healthy discharge of its functions, presents such opposite states as the brain during the period of being awake and asleep, and yet we may reasonably doubt whether these states are accompanied by any physical change in the brain, or its appendages, of sufficient magnitude to be within the cognizances of our senses.

Can we perceive any physical alteration in the cerebro-spinal system of an animal suddenly killed by prussic acid, or by a violent concussion? and yet, both these undoubtedly act on the nervous system.

Nothing proves in a more convincing manner that morbid anatomy cannot be expected to reveal the nature of all cerebral diseases, as has been too implicitly taught by many French pathologists, than its being totally incapable of suggesting or explaining the action of some of our most useful remedies. Thus, what are the physical conditions of the brain in delirium which indicate, if known, the exhibition of opium? or, in other words, why does this medicine act so much more beneficially in *delirium tremens* than in other species of delirium? What physical change does the nervous mass undergo in *chorea sancti Viti*, which would lead us to expect such decided advantage from the carbonate of iron? What alteration of nervous structure would induce us to try the effects of arsenic in certain cases of neuralgia, or of strychnine in paralysis from lead? Would the inspection of the brain of a person labouring under sea-sickness, of itself be sufficient to prove that the only certain method of

checking this vomiting is to replace the patient on *terra firma*? All these considerations, gentlemen, leave no doubt on my mind that the ancients were not so wrong as Rostan* and others would have us believe, in thinking that many nervous diseases were unattended by unappreciable organic changes in the nerves, or nervous centres†.

The object of morbid anatomy, therefore, should be, not to explain the causes of all cerebral diseases, but to investigate and ascertain in what number of such diseases we may with confidence refer the origin of the symptom to evident lesions. I fear much that modern authors have not sufficiently attended to this distinction, and, consequently, have most injudiciously endeavoured to establish systems embracing all the various diseases of the brain and spinal marrow on the basis of morbid anatomy, a mode of proceeding injurious to the latter science, and little calculated to promote the interests of practical medicine. If other proofs of the truth of this assertion were wanting, I might appeal to the almost endless opinions lately published concerning the physical alterations of the brain supposed to produce insanity and its attendant diseases; opinions apparently supported by numerous dissections, but really too often resting upon the supposed existence of morbid appearances, which are sought for with such avidity that they are *always found*!

[We are requested by Dr. Graves to supply an omission in a former abstract of one of his lectures, where the name of *Mr. Newton* should have been mentioned as the first discoverer of the fact, that the serum of dropsical effusions frequently contains a small portion of fatty matter. We are also requested to state, that the general law concerning the action of poisons is not expressed with sufficient clearness in another of our abstracts‡. It should rather be—"All poisons give

* Ah! on ne trouve rien! c'est fort aisé à dire, c'est commode; cela débarrasse du soin de se livrer à des pénibles investigations; mais daignez chercher avec attention, et vous verrez combien les cas où l'on ne trouve rien sont rares, &c. &c.

† Broussais has made some excellent observations on this subject.

‡ See p. 676, present volume.

rise to trains of symptoms constituting certain diseases, of which we may always find a counterpart among those diseases which arise in the system from causes unconnected with the action of any of the substances usually called poisons." A good example of the application of this law is the great similarity which exists between the species of gangrene produced by the poisonous qualities of ergotted rye (*secale cornutum*), and the gangrene which sometimes arises spontaneously in old age (*gangræna senilis*).—E. G.]

ON THE ACTION OF THE ABSORBENTS.

BY GROVE BERRY.

[Concluded from p. 746.]

ANOTHER fact also will assist in accounting for the phenomenon of the progression of the absorbed fluid, without ascribing it to any power which the vessels themselves possess, though Bichât allows them to have "insensible organic contractility."

"The chemical agencies of electricity were found, by Sir Humphry Davy, to be exceedingly extensive. As in the voltaic contacts of metals, copper and zinc appear in opposite states, so he found that acids and alkalies, with regard to each other and the metals, possess naturally the power of affording opposite electricities, "being, as may be said, respectively in states of negative and positive electrical energies," and are consequently attracted by bodies in contrary states. Thus he finds the decomposition of many bodies, particularly those containing acids, alkalies, alkaline earths, and metallic oxides, is effected by the voltaic circuit; all acid matter arranging itself round the positive point, and the alkaline matter and the oxides round the negative point: the acids and their bases being thus separated even in their stony neutral compounds. By these attracting and repelling powers of the different electricities, acid and alkaline matters are transported even through menstrua, for which they have a strong attraction: thus sulphuric acid will be repelled, through an

alkaline solution, from the negative to the positive point; and potash, or lime, will be repelled from the positive to the negative point through an acid solution.

"From his numerous observations and experiments, Sir H. D. is induced to question 'whether chemical unions and decompositions are not the result of the electrical energies of the bodies; and whether elective affinity is not the same property with electrical energy' *?"

It has been proved on the leaves of trees (see an Essay on Gardening, in a number of the Quarterly, I believe July 1828), that some membranes are positively and others negatively electrified; and that the actions of either on certain substances (as acids or alkalies dispersed in air) is the cause of absorption, with *considerable force*, by the absorbing mouths of these membranes. Also in the roots of trees, the action of absorption is so powerful that it is able to raise and sustain a column of sap in a capillary tube to the height of thirty-five feet; which could hardly be the case if we do not suppose some power to be acquired from the particular electrical state of the agent, or of the matter acted upon: at any rate, it never can be that any contractile power of the tube itself can be any thing like so great.

Suppose, now, the action of the absorbents in the animal system to be out of the reach of nervous influence: arteries, on the contrary, we know to be variously affected by it. The removal of callus, then, for instance, and of the matter which forms old cicatrices, &c. which occurs in sea scurvy especially, takes place because the action of the absorbents is going on only as usual, while that of the arteries of supply is diverted, as it were, by the disease.

This disease especially seems to be the consequence of debility, and all the vital functions are impaired, except this one of absorption; and even the degree of support necessary for the existence of the individual is vastly diminished: thus, first all those new parts which may be supposed to have least vitality, and then even those which were before replete with it, are carried away more or less by the absorbents, which go on as heretofore, unimpaired by the disease; and because their action keeps up in only its wonted degree, while every other process is declining, the effect is

* Parkinson's Chem. Pocket-Book: Appendix.

the same on the mass as if absorption itself were greatly increased.

Again : during conception the uterus increases in size, because the unvarying action of the absorbents cannot cope with the immensely increased arterial action. After delivery, too, the absorbents are still going on in their old way, but the arteries are paralysed, as it were, from the sudden emptying they have sustained; and by the time they have recovered and adapted themselves to their contents, the absorbents have reduced the uterus to its *proper*, though not to its *original* size. Indeed, is not the recovery and adaptation of the *arteries themselves* to their diminished contents the work of the absorbents, as well as the reduction of the uterus?

The uterus never does acquire its *original* size; after it has borne one child it never does diminish to the size it was before impregnation; it is as if the arteries had recovered and adapted themselves, and become a match for the absorbents too soon.

It will be considered strange that the absorbents can so speedily reduce the uterus, which has been nine months in acquiring its vast size; but it must be remembered that both processes are going on while the uterus is enlarging—both absorption and deposition; and that the latter, moreover, is vastly increased; but while the uterus is being diminished in volume, absorption only is going on, which will account for the difference of time required for its enlargement and for its reduction.

It has not been noticed, or, at least, we are not taught to believe—indeed, we are taught in England the contrary, by lecturers and books on midwifery—that the uterus is *not at once* got down to its former size immediately after delivery. Within half an hour after, the fundus uteri, though hard and contracted, has arisen very considerably; and within two hours after delivery, is nearly as high as the umbilicus, more or less, *in every case*; and it takes a fortnight or more to reduce it to the size which it was before impregnation; and as long as it is larger than before, the lochia continue to flow until it has acquired its proper size. My friend, Dr. Rigby, of Norwich, first directed my attention to this point. I have attended many cases, with my attention especially directed to it, and never saw it

otherwise. He tells me this is taught in Germany; but certainly the very contrary is taught in England, in that it *at once* sinks down into the pelvis, and does not rise till it is again impregnated. Thus its reduction is not a sudden thing; for the absorbents only going on in their old way, take a fortnight or more to effect it.

Witness the emaciation produced by long confinement from illness; the action of the arteries has been diverted by the disease, yet absorption has been going on in only the *ordinary degree*, unless we can imagine that the same cause can at the same time check the action of one set of vessels, and stimulate that of another set, which exist together in the same system.

On the contrary, see the increasing fatness of the lazy epicure; every function in the body is *increased* except that of absorption, which seems to be out of the reach of contagion, good or bad. When I say *every* other function, I may perhaps except one more—the mental.

Why are glands placed along the course of these vessels, but that, because the absorbents take up indiscriminately any thing which comes in their way, it shall be decided by the glands whether or not the absorbed matter shall be admitted into the system? When offensive matter is taken up, the absorbent vessels themselves are not affected by it; it is the glands that bear the brunt of the noxious matter.

Poisons, too, are taken up by the lacteals; poisons of every description, mineral or vegetable, acrid as well as tasteless—all are taken up very speedily; so much so, that the difficulty is to get remedies, or antidotes, into the stomach soon enough; and the difference of time which is occupied in the taking up of some to that of others is probably owing, not to any property of election they have been supposed to possess, but to the *possibility* of the matter being absorbed by such small orifices, till a more minute subdivision, or solution, of their particles has been effected.

The application of cold promotes the absorption of a tumor; action of the arteries of supply is thus diminished, because they are constricted, cannot contain so much as they did before, and therefore cannot supply so much; but absorption goes on in spite of it, and would undoubtedly go on further than

we wished it to do, if the diminished capacity and action of the arteries of supply were preserved.

Pressure, too, promotes the absorption of a tumor; but how does it act? not by increasing absorption (though that process may be facilitated by it, inasmuch as the matter is kept in contact with the absorbing mouths, supposing solution not to be a necessary condition), but it must at any rate have the effect of squeezing it and diminishing its size, and thus the room for fresh supplies of nourishment is more or less wanting. But absorption can go on in a part however small and contracted it may be; indeed, the smaller the vessels, as long as they are pervious, the more actively will this process be carried on.

The sac of an aneurism produces the absorption of any thing which lies in its way; first, perhaps, the part is merely irritated, and the arteries set about defending it; but the irritation goes on beyond, and amounts to pressure, which will act the more vigorously in proportion to the quantity of matter which the arteries have thrown out.

In the process of exfoliation of bone, the groove of separation is made almost entirely in the dead part, with as little expense as possible to the living; for as fast as the absorbents take it away the arteries replace it, sometimes even faster; and the exuberances which are produced lock in the sequestrum; but when taken out, we find the sequestrum, or lamina, rough and uneven, proving that the absorbents have been acting upon it on all sides; but not so with the living. Mr. S. Cooper, in his Dictionary (Art. 'Exfoliation'), says, "he shall have occasion to notice the efficacy of blisters kept open with savine, in quickening the process by which dead portions of bone are removed," &c. What is this but artificially diverting the action of the arteries, while the absorbents are unaffected by the irritation?

I said that the absorbents act, however much they be constricted, provided they be pervious. The lacteals of the stomach, for instance, act upon that viscus, or its contents, when it is contracted into its smallest compass, and thus create the sense of hunger. Put the veriest morsel of food into it, and, although the vessels are so constricted, it speedily disappears, and the hunger becomes more craving than ever.

Examine the effects on a man who has eaten a larger meal than that to which he is accustomed. There is no pain at the stomach either now or afterwards; mere inconvenience, from unusual distention. The absorbents go on working away as long as any thing remains for them to act upon, and no pain or inconvenience is felt in the course of these vessels, because they have more than their ordinary work to perform. But see the effects on the heart and brain! When the system is just satisfied with the nourishment it has had, every part of the system is revived and invigorated by it; but as soon as more than common is carried into it by the lacteals, the heart is oppressed, and its action increased, to get through its great work; this induces congestion in the head, which, at the same time the heart demanding a greater supply of nervous energy, gives rise to headache, &c. And yet, though they are the means of producing all this disturbance, the absorbents work recklessly on. It may be asked, if the absorbents continue working on, why is not the man hungry when his stomach is empty, as heretofore, instead of having no appetite at all, as is almost always the case? With such general disturbance of the system, and that of the brain especially, is it difficult to suppose that the sensibility of the stomach to the action of these vessels shall be more or less impaired in a similar way?

Ought this general disturbance to be the case in that chief process on which the whole fabric depends for support, if the absorbent vessels were influenced by the nervous principle? Ought not their action to be suspended, or diminished at least, while the sanguiferous system becomes congested, and the nervous system oppressed, if it were at all subject to the influence of either?

In all the other operations of the body we observe a sympathy which excites our admiration. If the alvine secretions be checked or disordered—true, the hepatic system becomes gorged and painful from congestion—but the kidneys eliminate much which the intestines should have done, and the urine becomes turbid and high-coloured. If the function of one kidney be impaired, that of the other is proportionally increased; indeed, though one may be so much disordered as to be incapable of doing any thing, the other will perform

the office of both. If both alvine and urinary secretions be checked or diminished, the skin separates much more matter than common, and we have profuse colligative offensive sweats. If all the excretory functions be disordered, we have all kinds of disturbance, from mere congestion up to high inflammatory delirium. But there seems to be no such sympathy between the system in general and the absorbent system.

Medicines are introduced into the stomach of a man in a state of absolute insensibility, and if they are in time to act at all, the effect is the same as it is in one in full possession of his faculties. We see, too, all the functions dwindle in case of paralysis, except absorption, which goes on, and reduces the limb to the mere shadow of its former self.

Can we then suppose that these absorbent vessels are influenced in any manner by a power whose influence on the arteries we perceive in a thousand different ways, or degrees?

A seed swells in the ground from its having absorbed the juices of the ground; and is not this the case in the uterus with the human ovum, although absorption is carried on before any blood-vessel of support, or nervous sensorium, has been formed? A dead seed, and a dead ovum, increase in size, but they want the vitality of the living ones to modify the imbibed matter. In short, what is the essential difference between imbibition and absorption, only that the one process is carried on in dead and unorganized, and the other in living and more or less highly organized systems?

The matter which the absorbents contain always preserves the same colour—in the lacteals white—in the lymphatics nearly colourless; but this I conceive to be owing, not to any action of the vessels on their contents, but to the nature of their solvents. In the stomach and intestines these are the gastric and intestinal juices, which act more or less on most matters presented to them; and having effected a solution or suspension of them, they are speedily taken up, if sufficiently attenuated. There is, as I have said before, no doubt constant exudation in all parts of the body of the serum of the blood; and this, perhaps, is the general solvent for all matters which the lymphatics convey. This process of previous solu-

tion has not been deemed necessary; but it is said that exfoliation, for instance, goes on at once “by the removal of the phosphate of lime” (see that article, Cooper’s Dictionary). Can it be that a particle of earthy matter can enter the mouth of a tube, which *tube itself* cannot be seen? Is it not more likely to have been previously chemically changed? If it were so, one might think the whole of the sequestrum, or lamella, ought to be so, as it really is more or less; but this is not necessarily the case, for the chemical agents connected with, and modified by the vital powers, may be limited to the extent of that vitality.

Bichât says, in reference to this, “now since it is by separate particles that the nutritive substances are absorbed, then, in the absorbent function, no distinction between solid and fluid exists.” But surely the absorbents can act with greater facility on a fluid than on a solid, if it be merely on account of their different degrees of attraction of cohesion which they would have to overcome. Bichât indeed adds, afterwards, “that the distinction between solids and fluids exists only when they form a mass; their divided particles do not differ from each other, so that the same particles will alternately form part of a fluid or solid, as ice, lead, &c.” But what is the agent which effects this reduction of the mass to its proximate component particles, if it be not solution? It may, indeed, decompose them, and thus bring them to their ultimate particles, and give them a form and consistence capable of being absorbed with greater facility. This may account for the difference required in removing a solid and fluid.

In the separation of a piece of bone now, for instance, a groove is formed about the dead portion, of some lines in width; now across this groove the absorbents must reach, to act at once upon the bone; and how in this isolated state do they preserve their vitality? It will be said that granulations surround the piece to be separated, and in them the absorbent vessels vegetate; but these granulations do not dip into the furrows; these are usually filled with pus, or some kind of matter or other, as if this were the agent, or contained the agent, to effect the decomposition or solution of the sequestrum. Now in this the particles will

float within the reach of the open mouths of the absorbents, which may perhaps project a little from the living masses, but surely not across the groove, so as to come into contact with the dead part.

But again : all the vegetable kingdom is nourished by absorption, as well as the animal ; but are we to suppose that their absorbents are influenced by a sensorium, or an organic, sympathetic, system of nerves? We cannot; and yet there is no difference in their modes of subsistence, except as to the qualities of nutriment. Glands were unnecessary for their absorbents, because there is no danger of their pampering their appetites and desires, as animals do. The sources of nourishment to the vegetable kingdom are the simple juices of the ground; while man ransacks the animal, vegetable, and mineral kingdoms, to find out something that shall, by its novelty, gratify a palled appetite. Besides, as a moveable being, he is subject to a thousand chances of being infected by noxious vapours, either by inhalation, or absorption by the skin, or the absolute insertion of poisonous or noxious matter from bites or wounds; or, lastly, as a sensitive being, liable to irritation, from the simplest mechanical up to the most complicated chemical forms. And yet absorption is not more essential to the animal than to the vegetable kingdom, for if they be deprived of matter for absorption, both alike die.

Improvements in cultivation, too, are effected in the same way, and on the same principles, as remedies are given to animals; different kinds of soil and manure are presented by the gardener, with full confidence of their being taken up into the tree and improving it and its fruit. Yet we cannot suppose that their distal and most slender mouths can move about, and instinctively take this or that in preference to the other. And why should it be deemed necessary in reference to man and animals? If the absorption only of that which is nutritious from the stomach be the sole or primary intention of their existence, their delicate and sensitive mouths ought surely to close when a particle of a noxious drug comes into contact with them. But it is not so, we can confidently argue, from precedent in the administration of medicines, and as confidently prognosticate their effects. This

ought not to be the case if these vessels were actuated by the capricious wills and fancies of their owners. The peculiarities which we call idiosyncrasies are exceptions to general rules; but I conceive absorption to be not at all at fault. I remember a young man who was recommended to take mercury, which he did for a considerable time, but could not produce ptyalism; he feared that he was not affectible by it, but at the very time a silver watch and money, which he had in his pocket, had become blue, though this was the only proof of the affection of the system.

The only difference in the modes of nourishment between trees and animals, is that the order of things is reversed. In animals digestion, assimilation, elimination, &c. are effected in the stomach *previous* to absorption; but in trees these are effected by the leaves *subsequently*, though, most probably, the matter is more or less modified in its passage through these living vessels. But let the modification be ever so great, the process must be considered, in trees at least, as the effect of the simple operations of vitality, not of any nervous principle.

If this explanation of the *modus operandi* of these vessels be admitted, there will be one other indication in the treatment of disease; not only to divert the action of support by counter-irritation, &c. but to diminish or suspend it by acting on the heart and arteries. Our means will be directed to the process of formation, not to that of detractio; although whatever diminishes the former must relatively, though not actually, increase the latter. We shall have to regard the process of absorption as unalterable, and entirely out of the reach of control or stimulus, and all our remedies must attack secretion. This is, indeed, the *plan* of treatment which is now generally adopted in all cases where it is desired that absorption should preponderate; but the *intention* has been to quicken this process, not to diminish action.

Bichat considers it "very important to tell whether effusions, as dropsies, &c. are dependent on increased action of the exhalants, or deficient action of the absorbents. Effusions into the pleura and peritoneum," he continues, "are generally dependent on increased exhalations, though absorption also may be at fault."

Increased action of the exhalants is a questionable term. Exhalation, when it exists to excess, is probably the result of debility; consequently increase of exhalation will be the effect of diminished action, or at least power. It is an operation that is rather permitted than effected by the seerning arteries. Thus our first object would be, in this case, to give power and tone to the system, and we shall have no occasion to fear increasing the action of the absorbents by our remedies, as we may hope to do the power of the exhaling arteries.

I fear I shall be considered chargeable with prolixity; but as each supposition I have advanced throws its own share of light on my meaning, I trust I shall be excused.

"OBSERVATIONS ON HERNIA."

To the Editor of the London Medical Gazette.

SIR,

In your Journal of February 19th appeared a communication from Mr. Lizars, entitled, "Observations on Hernia," containing the details of two cases which he considers peculiar, and has given evidently with the intention of proving the necessity of operating in all similar circumstances. With the former I am unacquainted, but the patient Janet Sutherland, from first to last, happened to be under my care in the Royal Infirmary; and as through your valuable, and usually correct Journal, several inaccuracies are in circulation regarding her case, I beg leave to present you with the genuine reports made by me in the surgical journal of the house, and *said* to be verbatim extracted by Mr. Lizars. Perhaps I might not have troubled you with even the slightest allusion to the matter, had not the case, and particularly the *operation*, attracted considerable attention in the surgical wards here at the time, and as Mr. L. has actively circulated his "Observations and Cases of Hernia" among the students.

Janet Sutherland, æt. 35, admitted on Saturday evening, November 6th, 1830. She was a patient in the same ward about six weeks ago. On her admission on that occasion she had a crural hernia

of the left side, which had been down for eight days, and was accompanied with obstinate constipation of the bowels, tenderness of abdomen, nausea, vomiting, and acceleration of pulse; but no pain of the tumor, although there was some tension. From the history of her case at that time, a portion of the tumor was known to have been constantly down for upwards of a year. The size of the tumor was considerably diminished by the taxis in the bath, and then, by the use of purgative injections, the bowels were freely opened, and their functions continued natural; the other symptoms disappearing.

She states, that after leaving the hospital the tumor still further diminished, but *never went up entirely*. Nine days before her present admission, after costiveness of the bowels, the tumor again increased somewhat beyond its former bulk; since which her bowels have not been opened, and during the week she has had pretty frequent vomiting of a green bilious fluid. There is much distention of abdomen, and pain on pressure at the lower part of epigastric region; also considerable distention of tumor, but *no tenderness of it whatever*. Tongue furred, and pulse small and wiry. The patient was immediately placed in the warm bath, and, on grasping the tumor with the hand, the *contents of the intestine went back into the abdomen with a gurgling noise*. The tension and size of the tumor being diminished to the same extent as when she left the hospital last, no further attempt was made at reduction. A turpentine injection was then given, which produced a copious dejection (lbs. iii. according to the nurse) of hardened fæces. A draught of salts and senna was then given, (which was vomited,) and twelve leeches applied to the abdomen.

7th.—A turpentine enema was administered this morning, but was not retained. No stool. Symptoms continue unabated, with vomiting of a greenish fluid, having *no stercoraceous smell*. No tenderness of the tumor. Mr. Lizars, in absence of Mr. Liston, again placed the patient in the warm-bath, and attempted the taxis unsuccessfully. He then proceeded to an operation, which was performed by making a T incision, exposing the intestine, which was about three or four inches in length, and found adhering to the sac at almost every point. The sac contained

two cysts of serum, which was evacuated. Gimbernat's ligament was cut through, and a portion of the neck of the sac dissected from the intestine, and the hernia was left in its position, as it could not be reduced, from its extensive adhesions. The wound was brought together by stitches, and a compress applied. About half an hour after the operation, a strong purgative injection was administered, after which the bowels were freely opened. Twenty-four leeches were applied to the abdomen, and ʒss. castor-oil given.

8th.—Bowels freely opened from the oil; leeches bled well; little tenderness or distention of abdomen; pulse 120, soft.

9th.—Complains of pain of wound; compress and bandage removed. There is slight erythema around the wound, and no adhesion of its edges; otherwise as yesterday. Poulrice to be applied.

10th.—Stitches all removed; integuments have retracted, and leave the intestine exposed, which presents a coating of lymph upon its surface. Less uneasiness of wound; pulse slower; bowels open; no distention or tenderness of abdomen. From this date she gradually recovered; the bowels continuing pretty regular, with the occasional assistance of laxatives. Granulations rose from the surface of the intestine, and the wound was firmly cicatrized by the 6th January 1831, on which day she was dismissed.

Those who have taken any interest in this case, can compare the incorrect copy of the reports furnished by Mr. Lizars with the preceding, which I have taken verbatim from the original; and they will then be able to judge whether the case could have terminated "fatally" had any other treatment than *operative* been resorted to. To assist their conclusions, I may add a few facts. The patient, when formerly in the Infirmary, under Mr. Liston's care, laboured under *precisely the same symptoms*, and was cured by *purgative injections*, after the tumor had been reduced by the taxis to its usual size. The same treatment was commenced on her second admission, and the first enema brought away lbiii. of hardened fæces, termed "a scanty dejection;" the second was not retained; and on a third being prepared, it was quickly forbidden by Mr. Lizars, who declared that the symptoms did not admit of such

delay. After the operation, the bowels were not relieved till after the exhibition of a powerful enema. The intestine, when exposed by the operation, presented the usual appearances of venous turgescence, as might have been expected; but to my eye, at least, it was certainly not of "a dark livid colour." The cysts of serum chiefly composed the tumor, and on the evacuation of their contents the intestine collapsed, and would have receded, I have no doubt, had it not been naturally irreducible, from its extensive adhesions.

Yours, &c.

DAVID RITCHIE, M.D.

Lately House Surgeon to the Royal Infirmary, Edinburgh.

INVERSION OF THE UTERUS.

To the Editor of the London Medical Gazette.

Minster Yard, York,
March 5, 1831.

SIR,

THE following case is perhaps worthy of being placed on record in your Journal, not only from the rarity of its occurrence, but from the success which, after so long a period had elapsed, attended it.

Your obedient servant,

H. S. BELCOMBE, M.D.

Jan. 30th, 1831, I was requested to see a young married lady, who had come some distance from the country for the benefit of medical advice. The history of the case was shortly this:—She had been delivered *twelve weeks* back of her first child; the labour was tedious, rather severe, but natural; the child being expelled, the placenta was pretty forcibly pulled down, and the extraction gave her much pain. Since that period she had had a constant sanguineous discharge, which was attributed to weakness, and was in vain attempted to be arrested by tonics and by astringent injections. Her debility increasing, her friends determined to remove her hither, and to call in further advice.

I found my patient pale, exsanguined, very feeble, and with all the symptoms attending profuse hæmorrhagic discharge. Her account gave me a suspicion of the nature of the case; and, upon being permitted an examination, I

traced, as I expected, an inversion of the uterus. The tumor formed a large spherical pouch, projecting considerably from the os tincæ, which remained in its proper situation; (it appeared that the fundus uteri, having passed completely through the os, remained strangulated at the cervix;) it was very painful to the touch, continually bleeding, and too surely threatening to exhaust life by its constant drain. Under such circumstances I was very glad to avail myself of the able assistance of Mr. Brown, whom it was proposed to consult, as being the surgeon of the family to whose care my patient was confided, and he, upon examination, concurring entirely in my opinion, determined instantly to endeavour to replace it, an operation difficult enough, considering the long period of inversion, the great engorgement and strangulation about the cervix, and the extreme irritability of the parts. With great tact and assiduity he at length accomplished it, by making a firm pressure upon the pouch, and pushing steadily upwards, while, with my hand upon the abdomen, I endeavoured to give a corresponding support. The pain to the patient was excruciating, and for a time it seemed as if the stricture would not yield; but by unwearied exertion he at length happily succeeded.

From the period of replacement the hæmorrhage ceased; and though symptoms of irritative fever ensued, yet they were presently subdued, and by the 19th of February our patient was so far recovered, as to be enabled to return home.

MEDICO-BOTANICAL SOCIETY.

Wednesday, 9th Feb. 1831.

EARL STANHOPE, PRESIDENT, IN THE CHAIR.

Notice of a new Emetic, called Corowarai—History of the Poppy.

AFTER the preliminary business had been concluded, the Secretary (Dr. Sigmond) read two papers communicated by Dr. Hancock, the first containing some further interesting observations on the Guaco, and the second on *Corowarai*—a new emetic brought from Demerara. The root in which the emetic property resides, and of which there were some dried and sliced

samples on the table, was said by Dr. H. to belong to an undescribed orchideous plant; but of this, as no specimens of the leaves or flowers were produced, we could not judge. Dr. H. stated the drug to be tasteless, and described it as exciting nausea and vomiting more easily and in a less dose than ipecacuanha; furthermore, that it is so abundant that it might be brought to market at a much lower cost than the last-named medicine. The Professor of *Materia Medica*, who had tested the *Corowarai* on his own person, confirmed the statements of Dr. Hancock, and expressed his conviction that it would be found a valuable addition to our list of medicines, especially for administration to children, on account of its much smaller dose and much slighter taste. The specimens were subsequently committed to the charge of the Professor of Chemistry for him to examine, whether this plant contain emetin, or whether its active emetic principle be different from that of ipecacuanha. The results of this chemical investigation we shall notice when the report is laid before the Society.

The President then requested the Professor of Botany to commence his lecture on the *Poppy*, which Mr. Burnett commenced with some etymological remarks on the origin of the word *papaver*; he then immediately proceeded to define the genus, as it has been lately circumscribed (excluding *meconopsis*, *romoeria*, &c.), as also the several most important species of *papaver*, especially the *somniferum*, all which descriptions were illustrated by specimens. The natural history, culture, produce, &c. of the poppy, were consecutively adverted to; and the lecture concluded with an exhibition of the allied genera, which form, with the poppy, the natural group *papaveraceæ*, and some physiological observations on their structure, by which the apparent anomalies in several, as *breconia*, *eschscholtzia*, *clancium*, *chelidonium*, &c. were reconciled. At the conclusion of the botanical details, the Professor of Chemistry, Mr. Everett, gave a very elaborate and animated account of *Opium*, and shewed experimentally the modes in which the proximate principles may be educed, and the active separated from each other and from those which are inert.

At 11 o'clock the Society adjourned to Tuesday, 22d March, when the me-

dicinal and toxicological powers of Opium will be discussed by Drs. Whiting and Clendinning.

On the table, besides numerous presents of seeds, books, &c. we noticed a very good collection of fresh medicinal plants, all that this early period of the season will afford, which were presented by Mr. Gibbs.

ROYAL INSTITUTION,

Friday, March 11, 1831.

SIR GEORGE DUCKETT, BART. VICE-PRES.
IN THE CHAIR.

Mr. Ainger on the Pencil and Pencil-making Machinery of Mr. Mordan.

MR. AINGER introduced his description of Mordan's ingenious apparatus, with a short dissertation on plumbago, from which it appears that Cumberland still retains its pre-eminence for the supply of black-lead, and that no other part of the world affords plumbago which can compete with that of Borodale: the Spanish, which yet creeps into the market, fetches no more per cwt. than the Cumberland lead does per lb. viz. 30s. Hence was it that during the war, when the French were cut off from supplies from Cumberland, their government, as in the case of sugar, offered a reward for the discovery of a process by which this substance could be made artificially, and the process which was found to answer best consisted in, mixed, one part of the best black lead dust that could be procured, with two parts of fuller's earth, and then forcing the softened mass through a small square hole, so that the marking material was easily made, and their store of plumbago much economized. Several other attempts have been made to manufacture plumbago. Mr. Faraday entered on some experiments on this subject several years ago, but although he could convert a thin stratum of a rod of iron into black lead, he never could change the entire mass into plumbago. It has likewise been noticed that iron which has lain in sea water acquires a coating of black lead; but the fact which seems to us to promise most is one that we can vouch for, although not adverted to by Mr. A. viz. that iron gas-pipes become lined with the substance in ques-

tion, and when some were repaired at Apothecaries' Hall, a very thick stratum was found to have been changed into black lead.

Mr. A. next adverted to the extreme difference in price between common and good pencils, the latter costing a shilling a-piece, while the former may be bought, as of the Jews, for three-pence per dozen. This he attempted to account for by the fact of good Cumberland lead being just one hundred times dearer than the common Spanish plumbago, which is also mixed for use with an equal weight of antimony, not dearer than itself. Besides, the good plumbago wastes half in sawing into the small squares for pencils, so that in fact 8 oz. cost 30s. (not including workmanship), which is just 200 times more than the common black lead is worth. Even this, however, seems scarcely to account for the price of Mordan's points, which are sold at 2s. 6d. per dozen, while this same dozen only weigh $1\frac{1}{2}$ grains: hence 302 dozen only weigh an ounce, the price of which will at this rate be nearly 40l. i.e. about twelve times dearer than fine gold; or even allowing half the original lb to be wasted in cutting, the remaining 8 oz. of the 30 shillings-worth will be sold for about 300l.

It is said that the mode in which these needle-like plumbago points are made greatly increases their expense, for when the square sections are forced through holes of graduated sizes, in sapphires or emeralds, this shaving and rounding causes a further very considerable waste, so that practically one pound of lead affords only half an ounce of points: still this, after deducting the original cost of the lead, will leave a return of 17l. upon 1l. 10s. to pay for labour, machinery, and capital employed; without taking into the account the $15\frac{1}{2}$ oz. of powdered plumbago, which may be manufactured into second-rate pencils, much superior to those made with Spanish lead.

The pencil-making machinery of Mordan consists of circular saws for cutting the cedar, gouges for rounding, and instruments for planing, grooving, &c. the pencils, all worked by wheels and a windlass, and mounted on friction wheels, so that the pencils are much more accurately made and neatly finished than when done by hand. It does not, however, appear that pencils are

made more rapidly than before, for formerly a man could cut four gross per hour, or groove about five gross in the same time, and they are not made more rapidly than this by the machine.

The pen-making machinery is not the invention of Mr. Mordan, but of the late Mr. Bramah, who, by cutting the quills, and supporting them on pen-bearers, made four good pens out of one quill; but as this instrument has been long before the public, and its advantages duly appreciated, it does not now need our notice.

In the Library we observed a very ingenious portable mountain barometer, made by Robinson; also a portable transit instrument with levels, by the same clever artist.

The announcement for Friday, 18th March, is—"Mr. Ritchie on the Elasticity of Matter in general, and particularly on the Elasticity of Torsion in Threads of Glass; with the Application of this property to delicate Physical Research."

RIOT AT THE COLLEGE OF SURGEONS.

To the Members of the Royal College of Surgeons.

GENTLEMEN,

As a delusion prevails extensively, that the President and Council of the College are unfriendly, or at all events indifferent, to the fate of the naval surgeons, I am happy to be in possession of information fully adequate to the removal of this erroneous supposition.

The exclusion of these gentlemen from the levees was as much regretted by the President and Council as by any other member of the College. This is a conclusion at which you will certainly arrive after reflecting upon the following particulars.

On the 14th of last February, the day for the Hunterian Oration, a document was handed to the President, in the theatre of the College, purporting to be resolutions passed at a meeting of the members (*convened without his consent or that of the Council*) in the College Theatre, for the purpose of considering the regulation preventing the admission of naval surgeons to the levees—or to this effect.

The President and Council met upon

the subject, and felt it to be their duty to decline officially to receive and act upon a document not only destitute of all regularity but which originally had not even a signature. Yet a friendly feeling was sincerely entertained by this body for the naval surgeons; and the President, in his private capacity, even waited upon the Sovereign, and the first Lord of the Admiralty, pleading their cause, perhaps, with greater effect than if he had applied to these high quarters as President of the College. The result was, *a full expectation on his part, founded upon certain information confidentially communicated to him, that an arrangement perfectly satisfactory to these deserving members of a liberal profession, would be made; but that any public discussion of the business might have an unfavourable influence.*

Can it be said, then, that the President and Council showed any real indifference to the naval surgeons, by advising no public debate on the question in the College theatre? On the contrary, was not such recommendation calculated to promote the attainment of the very object for which the above-mentioned irregular document was placed in the hands of the President?

But, gentlemen, will you suffer yourselves to be dupes any longer? A very little consideration will convince you, that certain parties, so clamorous about the treatment of naval surgeons, have really in view, *not the good of these meritorious officers*, but the subversion of all order in the profession.

Information of what Mr. Keate had done, in behalf of the naval surgeons, with the reasons against a public debate on the subject in the College theatre, was actually communicated by him to Mr. King long previously to the 8th of March,—the day of riot. This associate of the principal ringleader—this "*confrère*," as he terms himself—was positively in possession of the true state of the case, before he went to the College on that day. Yet, apparently with the view of keeping the members of the College in delusion, and of throwing on the President and Council the odium of indifference to the respectability of the naval surgeons, this very same honest *confrère*—this man of candour—takes an active part in swelling the noise and clamour, most shame-

fully raised, against the conduct of Mr. Keate in the business!

Behaviour so disingenuous requires no comment: it speaks for itself, and pronounces its own condemnation.

With regard to the suppression of the riot, can any respectable member of the College seriously doubt that it is for the benefit of the profession at large that order and respect to the chair should be maintained at the times appointed for the delivery of the lectures? Can any reasonable man suppose, that attempts to interrupt those lectures by the noisy and endless topic of medical politics, ought not to be put down with firmness and decision? When, therefore, the gentlemanly injunctions of the President failed to bring certain members to a sense of their duty, on the 8th instant, *or to a remembrance of their admission-oath*, who is to be blamed for the consequences—the chairman, or the riotous part of the meeting?

I am, gentlemen,

AN ADMIRER OF TRUTH & CANDOUR.

March 15, 1831.

[We beg to direct attention to the preceding letter, because it is consistent with our own personal knowledge that the statement with regard to Mr. Keate having written to Mr. King in the manner described, is perfectly correct.]

MEDICAL GAZETTE.

Saturday, March 19, 1831.

“*Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso.*”—CICERO.

COLLEGE OF SURGEONS.

“It is *our* theatre,” cried several of the members of the College of Surgeons, during the disturbance the other day;—“I was sitting in my own house,” said the chief rioter, when at Bow-Street. The latter, who has evidently paid some attention to the subject, must have known that what he said was false; but with regard to the others, it is more charitable to suppose that they

were deceived by their leader, and really believed what they said. Now it becomes an important question, and interesting to all parties, to ascertain how the matter really stands—that is to say, in whom the proprietary rights in the buildings of the College are actually vested. For this purpose we have taken pains to inform ourselves correctly on the subject, and the following is the result:—

The charter empowers the corporation to possess and enjoy, among other property, a “Hall, or Council-house,” within a certain district; and directs that the “master (now the president) and governors of the said College, or one of them, together with ten or more members of the court of assistants, when and as often as to any one of the master or governors shall seem meet, may hold courts and assemblies, in order to treat and consult about and concerning the rule, order, state, and government of the said College.” It afterwards directs the election of the corporate officers to be made in the “hall, or council house,” by the parties above-mentioned, and empowers them to “make, ordain, confirm, annul, or revoke, from time to time, such bye-laws, ordinances, rules, and constitutions, as to them shall seem requisite and convenient.” As the College is intrusted with the examination of those who seek to become army or navy surgeons, the master and governors are incidentally obliged to provide a place for conducting such examinations; and they are bound by their charter, and by an act of Parliament, to provide a place for the dissection of murderers; while, as they have certain officers, they are also bound to provide them with a place fitted for the discharge of their various duties. Besides, certain devises and bequests having been made to the corporation, for the founding of lectures, and having been accepted by them, they are

obliged, on pain of forfeiting these endowments, to provide proper rooms for such lectures; but so far are these apartments from being identical with the College, that the governing body might, in its discretion, have erected separate buildings for these several purposes. They have adopted, as the more convenient mode, that of assigning to each certain apartments in one building. Having done this, however, they are obliged so to order their business, as to render these apartments applicable and convenient for their several purposes; and although the governing body may use them for other *Collegiate* purposes, yet even this they are only free to do when such arrangement *does not interfere with their appropriate use*. The "hall, or council-house, &c." are vested in the whole corporation by their constitution, and so is the entire building by purchase; but no individual, except for the purposes assigned, has any more right in them than he has in any private house not his own; nay more, as regards the theatre, the corporation are merely trustees for the purposes of the lectures. It appears distinctly from the charter, that no person has a right to convene the governing body, even on matters relating to the corporation, except the master and one of the governors (now the president and vice-presidents); nor has either of these officers, much less a member of the College, who holds no office, a right to convene there the members at large for such purpose. Indeed, if nine-tenths of all the members of the College, *including the governing body*, were to convene and make an ordinance, it would be void, inasmuch as the governing body would be acting in a capacity not acknowledged by the law. We put the matter in this light to shew how little the ordinary members, or "commonalty," have to do with the business of the College, as it thus appears that their interposition, though it were permitted, would vitiate and nullify

an otherwise valid act. But with regard to the theatre, so far is it from being the fact that any one, because he may be a member of the College, has a right to it as his "own house," that it does not even constitute an integral part of the College as a corporation, though for convenience it be included under the same roof, and the right of the members to it extends no further than as silent listeners to the lectures founded for their instruction, during the delivery of which, and at no other time, they have a right to be present.

We have thought it our duty to investigate this matter, and have had the benefit of a very high legal opinion upon the subject, so that our readers may rest satisfied that we have stated the privileges of the various parties who compose the London College of Surgeons simply as they are—having no object to serve except that of conveying correct information, and preventing the members from being led astray by trusting to the statements of designing knaves, who disguise the truth to serve their own ends. It is our business to represent things as they are—not merely as the members would wish them to be. One circumstance, we may remark, which has tended to throw some doubt over the validity of the College charter, is the statement contained in Paris and Fonblanque's *Medical Jurisprudence*, that it had not been confirmed by act of parliament; but we find that a renewal of a previously-existing charter—"a charter of revival"—does not require such confirmation.

As to the power of the Council over the members, it appears doubtful whether *at present* they can expel any one without a previous conviction at law,—perhaps not even then; but there is nothing to prevent them from publishing a list of recognised members—omitting the names of those who have violated the

laws they had become bound by their oath of admission to observe, and appending a note explaining the reason of such omission. This want of the power to expel members is a great defect in the bye-laws, and one which cannot be too speedily remedied: till this be effected, and those who disgrace the College expelled, an indelible stain must from this time forth remain upon its character.

Having thus explained the law of the case, we now come to view the subject in a different light. No man, who is not very blind or very uncandid, will deny that the present constitution of the College of Surgeons is essentially unpopular;—self-election is a mode of choosing the Council which will never be in good odour with the members at large. The question is not whether the system works well or ill—not as to its effect practically, but as to its principle theoretically, and this last is at variance with the spirit of liberalism which marks the times. It is not, we apprehend, so much to the end as to the means that a certain degree of jealousy attaches in the minds of many: we speak not now of Wakley's rabble, but of the respectable part—the great body of the members. We are ourselves unprejudiced spectators—faithful chroniclers of passing events, not partizans on either side—and we at once admit that there is something consonant to our ideas of chartered corruption in the self-perpetuating machinery of the Council. But when we turn from the ambiguous purity of their origin to the investigation of their acts—at least of their acts since the governing body consisted of its present members—we confess that we are at a loss to discover any very palpable abuses of which to complain. The first circumstance that one would naturally look for, as indicating the evil of a self-elected body,

would be the presence in it of those who ought not to be found there—of persons manifestly unfit for their situations, and who could only have owed their elevation to favoritism and intrigue. Now we question very much whether any other surgeons could be found whose names would carry greater weight with the public than those who actually constitute the Council. There may be—doubtless there are—some among them who are not very remarkable one way or other; but even these are persons of such respectable attainments that their omission, had it taken place, would have been made the subject of denunciation by those very men who now profess to regard their presence as blots on the character of the Council. If, however, we take the great majority of the Council, we assert—what in truth no reasonable man can deny, that their names hold the highest rank in British surgery—are familiar to Europe—are known, in fact, as the heads of their profession in the remotest corners of the world where the light of science has penetrated. But although the Council, viewed as a body, are undeniably men of eminence, yet it may be said that some equally deserving have been passed over. This may possibly have been the case formerly, but we know no recent instance of its occurrence; and on the other hand, the fact of Mr. Lawrence sitting in the Council shews that the most active, systematic, and persevering opposition to their measures, is not sufficient to lead to the rejection of any one, but that his attainments are placed against what we may naturally suppose the Council at least would regard as his delinquencies, and that the weight of the former, where it preponderates, fails not to turn the balance in his favour. But it may be said that Mr. Lawrence was elected from fear—as a formidable parliamentary opponent is provided with some

place by the minister of the day, to secure his neutrality. Supposing this to have been the case—and we do so only to avoid argument—what unworthy motive is to be assigned for the very last election;—that which took place immediately before the riot?—we mean the appointment of Mr. Swan. Neither fear nor favoritism can account for this; for he has never taken any part in medical politics, while he is so far removed from the influence of the partiality which might be supposed to result from personal friendship, or even acquaintance, that he is actually unknown in London, in which he has been resident so short a time that he is still spoken of as “Mr. Swan, of Lincoln.” It is to the reputation he has earned for himself by his anatomical works on the nerves, and to this exclusively, that his election is to be attributed; and it would be uncandid not to admit it as a proof that the Council are not always guided by selfish motives in the exercise of their patronage.

Such is the result of the machinery constituted as it is; what the result might be under the system of popular election, is very problematical. At present the diploma of the London College, the want of which is visited by no legal penalty, and the possession of which conveys no peculiar immunities—is held in the highest estimation;—though merely honorary, it is eagerly sought after as the test of a liberal education. The diploma bearing the names of Cline, Abernethy, and Cooper, carefully framed and hung up in the room where the surgeon receives his patients, is to be seen in every town and village in England. Suppose that by any accident a popular election placed one of the recent rioters at the head of the poll—and carry the idea but a little farther, and imagine the respectability of any one as an individual, and his qualifications as a practitioner, guaranteed by the signature of

Mr. Wakley—fancy cannot picture to itself a mockery of science more ludicrous, or a satire on Collegiate testimonials more complete. We admit, however, that this is an extreme case—we adduce it only as a kind of *reductio ad absurdum*—to shew what might by possibility happen—not what is within the range of probable events.

The preceding observations naturally lead us to another point—namely, the real extent to which, what may be called, *radical* sentiments, exist among the members of the College. There are many who may be called *reformers*—that is, who would prefer having a voice in the election of the Council, and who would be glad to establish a right of property in the building, such as should enable them to assemble there to discuss professional matters. Of such persons a great majority of the members consist. But of radicals—that is, of those who would support the riots got up by Wakley as a fillip to the sale of his papers—there is not one in fifty, and those few are persons of no note, influence, or name.

But as it appears that the Council are only trustees of the lecture-room for a specific purpose, it is quite clear that they could not legally throw it open for public discussions, even if so disposed. Neither, according to the present constitution of the College, would any measure be according to law in which the members or “commonalty” of the College took part. This we regard as an unfortunate circumstance for all parties, because any arrangement would tend to good which gave the members and the Council more of common feeling and common interests. The governing body would only have to appeal to the good sense and good feeling of the members at large, to place them as a bulwark between the College and the little party of the demagogue and his rioters. We

venture to say, that if a full meeting of the members of the College of Surgeons were by any means assembled, Wakley would at once be reduced to a perfect cypher;—he would sink into insignificance, just as his friend and prototype, O'Connell, has done, by being admitted into parliament. That it is more the manner in which the Council is elected than the persons on whom such election has fallen that is unpopular—that it is, rather the want of any neutral ground for freer intercourse—the absence of any fitting and acknowledged channel of communication, than any real difference of sentiments on professional questions, that has created the jealousy which exists between the Council and the members of the College of Surgeons, we are fully convinced; and we are satisfied that had the means been open and obvious, of appealing to the body at large, a protest against the disgraceful riot of the 8th inst., bearing the signatures of all the respectable members in London, would ere this have been laid on the table of the Council.

PARISIAN MEDICAL INTELLIGENCE.

THE contest for the chair of *Physique Medicale* has terminated in favour of M. Pelletan, a circumstance which has given much satisfaction to the medical world of the French metropolis. M. Pelletan was formerly a professor belonging to the Faculté, but lost his chair in consequence of the obnoxious ordinances of the Frassinous administration. It certainly redounds much to his credit, that his desire to connect himself once more with the Ecole de Medecine, has been backed by the ability and courage to enter into a contest with younger competitors, and still more so, by the good fortune

to come off victorious. His display of talent during the Concours has been marked by a singular clearness and admirable precision; and on every subject he shewed himself to be a perfect master. Of the six candidates who entered the lists with him, only two remained to dispute with him the palm; and of these two, M. Person is said to have acquitted himself in the next best manner.

The Concours for the chair of *Pathologie externe* was begun on the first of March. Eleven candidates started, but two of them retired after their first day's experience. Among those who contend for this professorship we observe the names of Cloquet, Sanson, Berard, Blandin, Velpeau, and Petit.

On the 4th of next month another Concours will be opened, for the disposal of the chair of *Histoire Naturelle Medicale*: and this, it is supposed, will conclude the combined labours of the Faculté and the Institut.

NEW COLLEGE OF MEDICINE.

THE whole profession will learn with pride and gratification that a new medical College is to be established, in which all abuses of every kind are to be done away. It is to be founded on the most enlarged, liberal, and gentlemanly principles; and all practitioners, whether "physicians, surgeons, or apothecaries, will be associated upon equal terms—will enjoy equal rights, and will be recognised by the same title!!!"

The whole of the appointments have not yet taken place, but the following, which have been handed to us, are quite sufficient guarantees to the public of the respectability of the establishment, while they will at once convince the profession of the high rank which the new College must immediately take among

the scientific institutions of Great Britain:—

President—MR. WAKLEY.

Vice-President—MR. KING.

Treasurers { MR. DERMOTT.
 { MR. SLEIGH.

Secretary—MR. M'CHRISTIE.

Confrères.

DR. MORSON.	DR. G. SMITH.
MR. G. WALKER.	MR. D.O. EDWARDS
MR. WALLER.	And several young
MR. COMPLIN.	gentlemen attend-
MR. BOWEN.	ing lectures in
DR. RAMADGE.	London.

Corresponding Members.

DR. JACOB, Dublin.	DR. M'INTOSH, Edinburgh.
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Beadle—MICHAEL KEARNEY (F. 21.)*

WAKLEY'S "ENTERTAINMENT" AT THE CROWN AND ANCHOR.

A VERY respectable meeting of the humbler and more obscure personages connected with our profession assembled at the Crown and Anchor in the Strand, on Wednesday evening, for the purpose of getting up a complete and perfect College of their own.

It was advertised that Joseph Hume, Esq. M.P. had been *invited* to take the chair, but this looked so like a trick—a hoax—which had been often played before—that nobody expected "the indefatigable" member to be present; and there being no sign of him for a long time after the hour appointed for opening the business, every thing seemed ripe for "a bit of fun"—the hisses and hootings of the impatient assembly calling out "chair," "chair," were regularly in progress, when Mr. Wakley entered the room; and shortly after—"his friend," Mr. Hume. The honourable member, upon taking the chair, attempted to account for the phenomenon of his presence in that assembly. Some persons, he said, might think him a fool for having come there at all, but the truth was, he had attended upon a very short notice, and was but very imperfectly acquainted with the objects of the meeting (hear.) He was himself a member of the Colleges of Surgeons of London and Edinburgh, and consequently took an active

interest in the welfare of the profession. He understood there was a complaint abroad—a charge of monopoly, against the London College; he feared that there was but too much ground for such a charge. However, he would abstain from expressing any opinion on the subject; indeed, he thought it unnecessary for him to do so, as he doubted not the gentlemen who would come forward that evening to deliver their sentiments would relieve him from any such duty. It was a duty which could not properly be imposed upon him, and he hoped he should be excused from volunteering to perform it. (Hear).

A gentleman now stepped forward to propose a resolution reflecting upon the present state of the profession, but he was requested first to give his name, which made him and his *confrères* look rather queer, feeling, no doubt, naturally enough, that it would not seem quite respectable in the eyes of the public that the mover of the first resolution for the founding of a new College should be a *person unknown*. The name of the individual was divulged at length, after much reluctance: it was "Bowen!" Only think of that—that nobody in the room, except Wakley and Co. knew the celebrated Mr. Bowen. The noisy interruption seemed to disconcert Mr. B. very considerably, and evidently broke the thread of his discourse—so he sat down abruptly, and was succeeded by his friend Wakley, the intended founder of the new College.

Mr. Wakley, in the course of a speech which, to our sad experience, lasted a full hour by the clock, exhibited rare powers of facetiousness and waggery. This speech had but one fault in it; namely, that it contained nothing new (and, perhaps, we might add,—nothing true); and proved to be so *dry* in the course of delivery, that the speaker was obliged to drink about a couple of quarts of water? to make himself fluent. He first fell foul of the College of Physicians, who had *but one charter*, a charter—his audience would scarcely credit him when he pronounced it—as old as the times of Henry the Eighth!—(Wonder and astonishment were expressed by the meeting upon the announcement of this fact.)—And this was the only charter the physicians of London had! The College of Surgeons—"the redoubtable

* The policeman who arrested the Bow-street officer for having discharged his duty.

college—of police notoriety”—had eight or ten charters—here was a grievance, too. But first he should say something of the Apothecaries' Company—before he came to his loving friends of Lincoln's-inn-fields. The apothecaries, instead of throwing open the profession, got a bill of incorporation for themselves, in 1815. They were originally united with the grocers; but it was found that rhubarb and sugar could not agree well together, so they separated: rhubarb settled at Blackfriars' Bridge, and sugar enseoned itself in the heart of the city!—(Laughter.) What is now called the College of Surgeons was once incorporated with the company of barbers—they were all *shavers* together!—(Immense laughter.) Mr. Wakley animadverted strongly upon the injustice of giving charters to such people; and the fellows who obtained those charters were nothing but public robbers. The last charter (40 Geo. III.) was not a valid charter, for it was obtained “by fraud, and misrepresentation:” the King was imposed upon by the petitioners for that charter, and some of the petitioners for it were still alive, and members of the existing Council. Lord Thurlow had given its proper designation to the document when it came before him in the shape of a bill, and he had it very properly thrown out of the House of Lords: yet there were persons who had the consummate impudence to petition the King to confirm it in the shape of a charter. And what were the uses made of this charter? Why, it was suffered to lie quiet until the year 1823, when a bye-law was passed relating to winter dissections. Nothing could be more gross: the Council were teachers themselves—they were “neveys” and “noodles,” and they robbed every young man of three or four hundred pounds before he could show himself to be examined before them (shame). He did not speak upon his own authority only—he referred to a small work published by Mr. Lawrence some years ago—by that same Mr. Lawrence who was a member of the existing council. (Hisses.) Those hisses he was aware were not directed to him (Mr. W.), but he prayed to God that he, to whom they were directed, would show, before long, that he did not deserve them! Mr. Wakley now entered into a dissertation on *apostates*; and, proceeding “from grave to gay,” became dramatic, and

took off Sir Astley Cooper to the life: he mimicked Sir Astley's *brusque* manner, his action, his accent, &c. so as to excite thunders of applause from the meeting. But Mr. Wakley soon became severe again, and prosy; and serving up a *rifacimento* of the “poppy and mandragora,” which he has been offering to the public for the last three or four years in the shape of *leaders*, we heard nothing for a long time from him but the reiteration of “neveys” and “noodles,”—“noodles” and “neveys,” in ever-varying changes, as monotonous and as wearisome even as “Jemappe and Valmy,” “Valmy and Jemappe,” until at last we sunk under it, and fell into a profound slumber. When we awoke, we found that the meeting had vanished, and that it had ended in smoke.

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE,
DELIVERED BY DR. ELLIOTSON,
February 23, 1831.

Disease of the Heart—Rupture of an Aortic Valve.

I HAVE here, gentlemen, a heart, taken, not from a patient of my own, but from a patient of one of my colleagues, which illustrates a very interesting point in auscultation. I did not see the individual to whom this belonged during life, but I am told that there was a bellows-sound heard *after* the pulse; that there was a strong impulse of the heart on the left side at the moment of the pulse; but that after the stroke and the pulse a bellows-sound was heard, and then a pause took place.

Now it is supposed by Laennec, that when there is a constriction at one of the auriculo-ventricular openings, the bellows-sound is heard after the pulse; that the auricles contract after the ventricles, and after the pulse has taken place; and that if the blood that is passing from the auricles into the ventricles finds a difficulty, it issues into the ventricles with a bellows-sound. There can be no doubt, however correct this may be, that a bellows-sound may be heard *after* the pulse—*after* the contraction of the ventricles, from another cause—that is, from the blood regurgitating into the ventricle again. You know that nature has endeavoured to prevent all regurgitation from the pulmonary artery, and from the aorta, by three semilunar valves, which, with the assistance of the corpora sesamoidea, completely close the opening. If, however, these valves are torn, or are imperfect at any part, the opening will not be completely closed, and that a

quantity of blood will rush back into the ventricle as a matter of course, is evident enough ; and it is to be presumed, I think, that, if a portion should go back into the ventricle—that, going through so small an opening, it will produce a bellows-sound. I therefore should expect to find that if one of these three valves was imperfect—if it were diminished in extent, from being thickened and shrunk, or from being corrugated, everted, or inverted, or if it were torn, there would be a bellows-sound as soon as the ventricle began to dilate. These changes would occasion no bellows-sound at the moment of the heart's stroke, or the moment of the pulse, when the blood was rushing from the ventricle, but at the moment when the ventricle dilates after its contraction, after the stroke, after the pulse—that is to say, the moment the auricles are supposed to contract to fill the ventricles, at that same moment would the blood rush back into the ventricles from the aorta and the pulmonary artery, and therefore you would hear from this cause a bellows-sound.

Now here are the semilunar valves, here is the left ventricle, and here is the aorta. The aorta is more or less diseased ; you see white specks upon one part ; nay, more than that—here is a young aneurism—an embryoneurism, which in time would have been a large aneurism of the aorta, and destroyed life. Here is the commencement of the coronary artery ; but here is the aorta so diseased that a very little pouch is beginning to be formed. The disease of the internal membrane of the heart and aorta, just close to this—that is to say, in the situation of the valves, has been so considerable, that the central valve has not only become much thickened, but become shortened, so that it could not swell out, as the others would do, towards the axis of the opening. There is only about one-half of the depth which there ought to be to prevent a portion of the blood rushing through, but there is more than that—you see that half of the valve is completely torn through, and you see a filament of the lacerated portion extremely elongated, and attached to the side of the neighbouring valve ; and from there being such an aperture as this, the blood must have rushed through into the ventricle at the moment of its dilatation.

You observe that the process of nature in the case of aneurisms has already begun : to strengthen the part which has given way *within*, there are minute adhesions already forming *without*. This is a very delicate specimen of the first days of aneurism.

The circumstance which I have now shewn you, gave rise to a bellows-sound *after* the pulse, and I have no doubt that very frequently the bellows-sound which takes place *after* the pulse arises from the aortic valves not being sufficient to close the opening when the ventricle dilates again—not being

sufficient to prevent the regurgitation of the blood. This is a circumstance which, so far as I have been able to examine, was unknown to Laennec, and the first knowledge I had of it was from Dr. James Johnson, the editor of the *Medico-Chirurgical Review*. He told me that he had heard the bellows-sound from the reflux of the blood from the auricles into the ventricles. Dr. Johnson told me that I should find it mentioned somewhere in Laennec, other writers, but I cannot. I can only find one notice of it, and that is in Bertin, but he does not understand the subject. He says that if a bellows-sound arise from this cause, it takes place at the time it would occur from an obstruction. It is quite evident, however, that it must take place at the opposite period, when the cavity is dilating. You will find all this stated in my work upon *Diseases of the Heart*, at pages 20 and 21, and therefore I shall not dwell upon it.

Diseased Bladder.

I have here another very interesting preparation, taken not from a patient of my own, but of another practitioner, of a diseased bladder. The individual from whom this was taken had laboured under *cystirrhæa*, as it is sometimes called, or a discharge of mucus from the urinary bladder, for a great number of years. A large quantity of mucus was constantly deposited in the vessel which he used, and that it was true mucus was evident from its capability of being drawn out into long threads. He went on in this way for a number of years, and various remedies were used, but they were all rendered useless, I am quite satisfied, from his not listening to good advice—to common sense—but taking an excessive degree of exercise. Any remedy, however, that was at all irritating, did him a great deal of harm ; mild means only were suited to him. I am not sure that even these did him any good, but at any rate they did him no harm. The consequence of thus not taking care of himself, and taking considerable exercise, was, that what at first was a mere excessive secretion of the bladder, became at last organic disease of the organ, slow inflammation, hypertrophy ; and finally, pretty active inflammation.

Here is the bladder, amazingly thickened ; its substance seems in a high state of hypertrophy. You see that the muscular fibres have been considerably increased, and bands have been formed. Here is the verumontanum, here is the prostate, and here is a very considerable hypertrophy of the muscular coat, mucous membrane, &c. at the part corresponding with the trigon vesicæ ; so that a large transverse fold and pouch are formed by it. These small stones which you observe had nothing to do with the disease ; they came out of the gall-bladder. This person had from 300

to 400 stones in the gall-bladder, but he never suffered any inconvenience from them, and their presence in the gall-bladder was unexpected. You will rarely see a urinary bladder thicker than this. He had no stone, no stricture, no difficulty in passing his water, but an excessive gleet, if I may so say, from the interior of the bladder, for many, many years. We could almost fancy, from its rugousness, that the interior of the bladder was the interior of the stomach.

The symptoms at last were extreme pain, great agony indeed, a constant desire to make water, a discharge of blood as well as of mucus, which at last was rather pus than mucus. The agony, I understand, was dreadful. From excessive secretion, there came on chronic inflammation of the substance of the bladder, and at last that chronic inflammation became at times very active. Nothing is more common than for acute inflammation to supervene on chronic. The mucous membrane is very red. The pain, the blood, the puriform discharge, the emaciation, might have caused suspicion of ulceration, but none existed; and even chronic inflammation of any of the mucous membranes will cause these to a degree; but I do not believe it possible, from any symptoms, ever to declare with certainty that any mucous membrane is ulcerated.

Ulcer in the Pharynx.

In regard, gentlemen, to the patients presented, there was one among the women who went out not well, but unable to remain any longer in the house; she had an ulcer in the pharynx. I am not aware that it was syphilitic. She had been married eight years, and she had no other symptoms about her whatever, but an ulcer in the pharynx, which was seen at the back of the throat on opening the mouth. She said that she had had the complaint at different times for two years and four months; that she had been married eight years, and never had had any thing syphilitic. One tonsil was ulcerated, as well as the pharynx.

In this kind of ulceration I believe one of the best local applications is that of verdigris, as it is called—acetate of copper; if it be made into a gargle with honey, and properly diluted, it cleanses these ulcers better than any thing else. I believe it is an excellent application to foul ulcers in various parts of the body. I am sure that I have often seen a great deal of good done by it, after other applications had failed.

In cases of this kind it is necessary to support the system well, and therefore this patient had not only house diet, but a good allowance of porter; and she likewise took peruvian bark. The appearance of the ulcer was at last much improved; but her family concerns compelled her to go home.

Fever.

Among the men there was presented a

case of fever; but it furnished nothing at all peculiar. It arose, as nearly all the cases that I see here arise, from an exposure to change of temperature, from heat to cold.—We very rarely see any fevers here which are connected with contagion; and certainly you have never seen, during the whole of the winter, a single case in which fever has spread to any other individual in the hospital.

He was treated by local bleeding, and the exhibition of mercury, till his mouth was tender. The symptoms were headache, and pain and tenderness of the epigastrium—the two parts most commonly affected. The tongue was red, the edges white, and the centre of its back yellow; he had also diarrhoea. He took three grains of calomel every four hours, had twenty leeches applied on the temples, and was put on slops. As his diarrhoea continued, he had five grains of hydrarg. c. creta every four hours, instead of the calomel. The leeches were repeated twice, and thus he speedily got well.

Peritonitis.

There was likewise presented in the same ward, a patient who came in for *peritonitis*, and had had the disease, more or less, for seven days. It had come on suddenly after very hard work, so that most probably the man had been sweating profusely, and was then exposed to cold. The abdomen was tender over every part. He vomited, and had had no stool, he said, for three days. This alone would have made me consider that it was enteritis; but the tenderness extending to every part of the abdomen, I presume there was inflammation of the peritoneum generally, and of the intestines at some particular part.

He was bled immediately to fainting, and forty leeches were then without delay applied on the abdomen. I gave him a scruple of calomel, as he had had no stool for three days, and half an ounce of castor oil was to be taken every two hours afterwards. He took two or three doses of castor oil, when it was judged right to give him another scruple of calomel, as well as a common clyster and more castor oil, in the evening. This was all done, and then his bowels were opened; but it was not effected till he had taken two scruples of calomel, two or three ounces of castor oil, and had had a clyster. Sixteen leeches were applied in the evening, and he was considerably better. However, in the course of two or three days, some tenderness still existing in the abdomen, twenty leeches more were applied. He had a dose of calomel three or four hours afterwards, his mouth became tender, and he was presently well. You may judge of the rapidity of the cure, from the fact, that although the case was very severe—the agony excruciating—

he only came in on the 7th instant, and was able to go out on the 24th, notwithstanding these evacuations, and the free exhibition of mercury.

Secondary Syphilis—Cutaneous Eruption.

In the same ward was presented a man with a cutaneous disease, which I believe was syphilitic. The case was interesting from his having had the complaint two years. He was a married man, and there were on different parts of his face, particularly on his forehead, large patches of rather a dingy-red tinge; but the dingy-red was paler towards the centre, and of a deeper colour at the circumference, so that it looked almost like lepra, or some forms of porrigo—like so many ring-worms. I found that his head ached very much—that he was drowsy and giddy. I had him bled to sixteen ounces, and I purged him. On further inquiry the next day, although he had no pain in his limbs, I began to suspect that there must be something syphilitic in it. I observed a little scurf upon these patches, making it look altogether like lichen; and on one or two parts, at the back of the neck, I observed something like scales. It appeared to me to deserve the name of lichen, or of a faint or minor degree of lepra; and lichen and lepra are the most common forms of syphilitic eruption. I learned that he had had syphilis two or three years before; and he had not taken sufficient means, as I conceived, to have eradicated the disease: I therefore imagined it was possible that this might be syphilitic. I persevered with antiphlogistic treatment, and, of course, gave mercury. He was bled on the 7th when he was admitted, and on the 9th I found it necessary to bleed him again to a pint; and blue pill, which he had taken in doses of ten grains twice a day, as it did not affect either his bowels or his mouth, was increased, on the 11th, to a scruple twice a day. The state of his head made it necessary to bleed him again, and he was bled to twenty ounces. On the 28th, for the same reason, he was bled again to a pint, and his mouth and bowels being unaffected, the dose of blue pill was increased to half a drachm twice a day. On the 28th, his mouth and bowels being still unaffected, the dose was increased to thirty-five grains twice a day; and the same circumstance continuing on the 1st of February, it was increased to thirty-five grains three times a day.

There is no rule for these doses of blue pill. You find most people have a sore mouth from five grains night and morning, and yet you will not unfrequently meet with patients who require as much as was taken here; there is no general rule. It would have been as absurd to have given this patient at last five grains night and morning, as it would have been at the beginning, with-

out knowing his insusceptibility, to have given him 35 grains three times a day.

His mouth now became affected, but not particularly so—so slightly that I did not omit the blue pill altogether, but reduced it to ten grains twice a day on the 8th; and upon the 11th, as his mouth was still tender, I reduced it to five grains twice a day, just sufficient to keep up the affection of the mouth. Under this treatment, although the man had been ill two years, constantly complaining of this eruption, he became completely well. I kept him till the 24th February, about a fortnight after the eruption appeared to be gone, and he then went away quite well, free from headache, and free from eruption. I presume this was a case of syphilitic lichen, or syphilitic lepra, but attended, like so many cutaneous diseases, with an inflammatory state of the head. I have notes here that whenever he was bled, the blood was buffed.

I should mention that extreme itching attended the complaint, which ceased as soon as he was bled. It returned again, however, and every subsequent bleeding took it away, till at last he had no itching—nothing more than eruption and headache. The case was of interest on account of our making out its apparent syphilitic nature from considering the circumstance that he had primary symptoms before—that the eruption was of a dingy colour—that it was lichen or lepra—lichenous lepra or leprous lichen, which ever you choose, between the two. But the headache and drowsiness on the one hand, and the heat and itching of the skin on the other, made me conceive that antiphlogistic treatment would be proper, in addition to mere mercury.

Inflammatory Headache after a Blow—Ulcers of the Legs—Efficacy of Liquor Potassæ.

There was a case of headache, in Jacob's ward, which was just like this, so far as it was inflammatory; but it proceeded from a different cause—from a blow.

Michael Murphy was admitted for pain of the head, which arose from a blow with a shillela. He had been at play, I believe, with some of his gentle countrymen, and had a slight tap, just sufficient to cause constant pain of the head, and make it hot and throbbing. He was very drowsy, and had considerable pain in the left temple, where the rap had been given. The character of the pain shewed that it was entirely inflammatory; but it was attended by heat, by throbbing, and drowsiness. The pain was of a sharp character, and, not like rheumatic pain, extending down to the face. The cause, as well as the character of the complaint, proved sufficiently too that it was of an inflammatory nature.

The treatment was simple enough, only it

required to be energetic. I put him on low diet, bled him to 20 ounces, and physicked him with senna and salts every day. Upon the 7th January he was bled again to 20 ounces, and upon the 11th he was bled again freely till he fainted. On finding that the bleeding was not relieving him, I gave him, in addition, five grains of calomel night and morning. In two or three days his mouth became tender, and five grains only of calomel were given every night. On the 18th the calomel was omitted, as his mouth had become very tender, and he was now a great deal better, indeed free from complaint. But on the 25th I found he had still signs of fulness of the head, and as he was a lusty able-bodied fellow, only 26 years of age, I took away one more pint of blood, and that proved quite sufficient.

He then thought he might as well inform me that he had had, for many months, sores upon his legs. I found that there were dark-coloured blotches in different parts of his legs in considerable numbers, and that some of these discharged, and were covered by a crust. A poultice was applied, when unhealthy-looking ulcers, about the size of a silver penny, were seen to be in a state of discharge, ash-coloured and foul. He had about a dozen on each leg.

I believe this is a sort of state in which many persons give sarsaparilla, and I ought to suppose often with very good effect. But it is well known that whilst surgeons have the greatest faith in sarsaparilla, physicians have very little. This is an anomaly; for surgeons who laugh at doctors and physic, in return are laughed at by many doctors, for believing that there is any good in sarsaparilla. I am, however, satisfied of this, that sarsaparilla is used both by surgeons and physicians in a great many cases where it does no good, and is not calculated to do any good; but I am not prepared to say that sarsaparilla has no virtue at all; only I know that, in many internal organic diseases, eminent physicians have habitually prescribed sarsaparilla in large quantities without doing the least good, and frequently with the effect of oppressing the stomach, of taking away the appetite, and thereby doing actual harm. I know many most estimable men—skilful practitioners—who are in the habit of prescribing sarsaparilla in almost every chronic internal complaint. However, as surgeons, who have greater experience in ulcers of this description than myself, are generally satisfied that it possesses very considerable power, it would ill become me to deny its utility; but I must say that I have too often used it in such cases without being able to find any benefit from it. In one case out of eight or ten I have fancied that sarsaparilla must have done good. In one case its power has been apparent, and then I have had ten cases afterwards in which it

did no good, and all my doubts were re-excited. I have frequently given the decoction of bark—I have frequently given common bitter drinks—frequently given the patient nothing, but kept him confined and very warm, and I found the same benefit. Frequently when I have been appearing to derive benefit from sarsaparilla, I have left it off suddenly, in order too see what the consequence would be, and the patient has got on just as well without it. I have made a great many observations of this kind, and therefore I do doubt whether it has so much power as many persons assert that it possesses. I should be sorry, however, to deny that it has power, and I will only say I am satisfied it is not so generally useful as many persons imagine, and that the regular diet and living, and the warmth of confinement to the wards, frequently effect what it obtains the credit of doing.

I recollect attending a gentleman for different internal complaints; but at last ulcers appeared, which were excessively troublesome; just such as appeared in this man. I got him much better by putting his general health in order, but the ulcers proved obstinate. I tried a variety of things, and having no extraordinary faith in sarsaparilla, I determined that it should be the last. After some time he wished for a consultation, and of course I threw no difficulty in the way. The moment a patient or his friends propose such a thing, it is expedient and politic to assent, and at the same time, when a case is obstinate, it is pleasant to oneself to consult with others. A very eminent surgeon—an excellent man—was called in, and he said, "This is a case in which I should give sarsaparilla." I coincided with him, as my list was exhausted, and had he not been called in, I intended to give that remedy on the following week. The sarsaparilla was given with liquor potassæ, twenty drops, three times a day. In two days the ulcers began to heal—in a week they were completely healed, and the patient has been well ever since. Since then I took up sarsaparilla again, but grievous and numerous have been my disappointments.

However, I cannot think it clearly proved that sarsaparilla did good, because it was given with liquor potassæ. I know that liquor potassæ has a great effect in cases of this description. I am determined to see, if I can, what is the effect of sarsaparilla alone, and what the effect of liquor potassæ alone. It is worth knowing, though it is not generally known, that John Hunter said liquor potassæ was the most effectual remedy for similar complaints that he knew of. You will find that Sir Gilbert Blane mentions, in his *Select Dissertations*, that John Hunter had been in the habit of trying all things in persons who had a disposition to boils, and that he never did

any good. I am sorry to say that has been my case. Boil after boil has appeared without my being able to controul the disposition to them; and then it has abruptly ceased. But John Hunter accidentally learned that liquor potassæ was exceedingly useful, though not a specific; and he gave it in every case which subsequently came under his notice; and thus succeeded, I believe, not only in causing the sores to heal when they were produced, but in putting a stop to the disposition to form boils. I have had no opportunity myself of ascertaining this fact in regard to boils. I recommended a friend of mine, who was much troubled with them, to try it; he did so for three weeks, and he has had none since; but whether three weeks' exhibition was sufficient, or whether he will still remain free from them, I do not know.

However I gave this patient whose case we are considering liquor potassæ, without sarsaparilla, and he speedily got better. It is right to say that red precipitate ointment was applied, and therefore I cannot positively assert that the liquor potassæ did him good. However he got well as rapidly with the liquor potassæ as if he had taken sarsaparilla, and the former is rather cheaper than the latter. It is worthy of a trial, not only in cases of boils, but in various ulcers, and in that unhealthy disposition occurring in the disease which is sometimes called *pseudo-syphilis*.

Epilepsy.

Two cases were presented of *epilepsy*, both of which did exceedingly well.

The one was a boy. I beg his pardon, he was twenty-four years of age; but gentlemen at that age are sometimes called boys. It is in print that you are all boys. He had been ill three weeks. He had a constant throbbing at his temples and in the forehead, and at the vertex. He had tightness of the forehead, as if it were bound by a hoop; a sensation of weight in the forehead, constant vertigo, and some little dimness of sight. His sleep was disturbed by frightful dreams. Sometimes his hands and his feet were benumbed, and tingled as if they were asleep. Besides all these symptoms, which were constant, he had fits of epilepsy. He was in the hospital, it seems, six years ago, for similar general symptoms in the head, and had faintings, as he termed them; but now, instead of fainting, he had regular epilepsy. I mentioned in a former lecture, speaking of epilepsy*, that, in its mildest degree, it resembles fainting. This lad accordingly, when he was here before, felt just as if he were only fainting; but this was decided inflammatory epilepsy, and to be removed required only antiphlogistic means.

He was cupped on the occiput to a pint,

put on low diet, and took mercury—ten grains of blue pill three times a-day. On the 20th he was bled to a pint, and on the 4th twenty leeches were applied to his temples; and these were continued every other day, with a cold wash. From the 12th of January twenty leeches were applied every day, to the end of the month; and from the 1st of February they were applied every other day. He had no more fits; in fact he had none after he came to the hospital, and all the pains in his head diminished so considerably that they were reduced to nothing, and there was no occasion to keep him in the house. Of course he took aperient medicine—house-physic every day, or every other day, accordingly as it was necessary. This was one of the cases of inflammatory epilepsy, and it was subdued by the adoption of anti-inflammatory means.

There was a patient likewise presented from the same ward, of whose case I formerly spoke*. It was an instance of the union of epilepsy with hypochondriasis. It was the lad who had been addicted to masturbation, and, in addition to epileptic fits, was troubled with extreme apprehension about his health. I found in him signs of fulness in the head, exactly as in the case to which I have now alluded, but with that he complained of extreme debility.

Common antiphlogistic treatment was adopted, just as in the last-mentioned case; but after all the epilepsy appeared entirely subdued, he frightened the sister of the ward by complaining that he was going to die, and that he could not walk. You must have observed that every time he was visited he said he had some dreadful complaint or other. He walked like an old man, tottering as he went. But finding that there was still sufficient strength of pulse, and recollecting that his head had been in an inflammatory state, I persevered with bleeding; and under copious depletion from time to time, and low diet, I got rid completely of his epilepsy, and in a very great degree, of his apprehensions and of his tottering walk. He was cupped time after time. When he came in, on the 11th November, he was bled to twenty ounces. On the 13th December he was cupped at the back of the head to twenty ounces. On the 18th he was cupped on the left side, to ten ounces. On the 21st he was cupped on the occiput, to sixteen ounces. On the 28th he was cupped on the occiput again, to sixteen ounces. On the 25th January he was cupped on the occiput to a pint. On the 11th February he was again cupped to a pint. On the 18th he was cupped to twelve ounces.

Now, under all this, he got into better and better spirits, till at last he was prevailed upon to sing a song now and then—actually

* Med. Gaz. No. 163, page 483.

* Med. Gaz. No. 163, page 482.

to laugh—and a Frenchman in the ward nearly got him to dance; but these were great efforts. He could not, however, at one time conceive it possible that he could get out of bed, and even at the very last he had some complaints, but they were far less than he had before. The last complaint was, that he had no pain any where, but what he spit up when he happened to cough he thought was of a very bad colour. He coughed two or three times a-day, and a little phlegm came up, as he imagined, of an alarming character. As it had come to this nonsense, I did not keep him any longer. He was now able to go up and down stairs, and he could go quick enough, although he still drew his legs a little sluggishly after him, as though he were afraid of falling down and breaking himself to pieces.

I may mention, that while I carried on this plan of depletion, I thought there was no impropriety in endeavouring to support his strength by iron. It is not inconsistent to relieve fulness whilst you invigorate and attempt to lessen debility; and though the pulse here was full, yet the muscles were flabby. He took the sulphate of iron, five grains every eight hours, till the 15th; and then he gradually reached twenty grains three times a-day, his bowels being regular, and he went out considerably improved.

There is one circumstance worthy of attention, but upon which I will not dwell, because I shall have occasion to speak of it again in a future clinical lecture. In him there was a most inordinate development of what phrenologists call the organs of circumspection, caution, or fear. That is a fact. I shall not make a remark upon it, but in this individual this part was most inordinate. It was not only larger than any other portion of the skull, but it was in greater disproportion than I ever saw it before in any individual. You must be aware that what I state is no exaggeration, because most gentlemen present examined him, and found (what you will not always see) an absolute bump, while the development of what phrenologists call the organ of courage was very deficient. His natural disposition, I have no doubt, was excessively timid.

The cases which were admitted last Thursday were, among the women, one case of erysipelas in the last stage, and a case of bronchitis, likewise in the last stage; so that it has been with great difficulty that both patients are now alive. Among the men there was a case of ague, one of rheumatism, one of enlarged spleen and indurated peritoneum, a case of ascariides, and a case of chorea or St. Vitus's dance.

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

DERBY INFIRMARY

Cases of Rheumatism cured by Acupuncture, after having resisted other means.

To the Editor of the London Medical Gazette.

SIR,

If you think the following cases of sufficient interest to merit a place in your valuable publication, you will favour me by their insertion.

I am, sir,

Your obedient servant,

RICHARD DIX.

House-Surgeon.

Derby Infirmary,
Jan. 25, 1831.

CASE I.—Joshua Smith, aged 35, admitted November 15th, 1830, into the Derby Infirmary, under Dr. Bent, has suffered from sciatica a year and a half, during which period he has been attended by several medical men. His symptoms are at present very severe; he is unable to raise himself into the erect position, or to walk, without extreme torture; and says, that the pain he has suffered since the first commencement of his complaint has been such as to prevent his obtaining sleep; he reports that he has been frequently cupped, and submitted to the application of moxa—has repeatedly used different baths, and taken a variety of medicine, with but little relief. Dr. B. under these circumstances prescribed acupuncture, and directed four needles, each an inch and a half in length, to be inserted where pain was principally felt, every other day, and to let them remain an hour. This plan was persevered in till December 6th, when he found himself much improved; his pains were less severe and less fixed, and he could walk with greater freedom. He now wished to try the steam-bath, and the acupuncture was omitted; but after using it a fortnight, and his complaint making no progress, he requested to have the needles again introduced, which was done and continued as before until January 15th, when he found himself quite free from pain, and able to walk with the greatest ease; his general health during this time was good, and the only medicine he took was a few aperient pills to regulate his bowels. He was discharged cured the following week.

CASE II.—Martha Phillips, aged 32, admitted October 25th, under the same physician, has been ill nine weeks; she complains of violent pain in the course both of the sciatica and anterior crural nerves, extending from the loins; has not been able to walk

for some weeks, and cannot assume an erect position; refers her complaints to a violent cold caught by exposure to damp; bowels costive.

Applic. C. C. coxæ et detr. sang. ad 3xx.
R. Hydr. Submur. gr. xij.; Pulv. Opii, gr. iij.; ft. Pilul. xij.—sumat ii. 6ta quaque hora.

Hab. Mist. Amar. purg. 3iss. pro re nata.

28th.—Says she is a little easier; complains of pain, which seems to be uterine; no discharge.

Applic. C. C. sacro et detr. sang. ad 3vj.
vespere, et hora somni injic. Enema Amyli c. Tinct. Opii, gtt. xl. Cont. Pilulæ.

Nov. 1.—Her pain was much mitigated by the injection, but is now severe again.

Repet. Injectio Opii 2dis. noctibus.
Cont. Pilulæ.

4th.—Her mouth is become sore; she complains of sickness and vomiting, and her bowels are loose; the pain of the hip continues severe.

R. Mist. Camphor. 3vij.; Ammon. Carb. 3ij.; Conf. Aromat. 3j.; ft. Mistur. sumat. 3j. 4tis. vel 6tis horis.
Om. Pilul. et Injectio.

8th.—Much relieved.

Pergat.
Utetur Balneo Vaporis alternis diebus.

13th.—Thinks the bath relieves; but the pain is very severe to-day.

Utetur Balneo Vaporis quotidie.
Om. Mistur.
Hab. Pulv. Ipecac. C. 3ss. omni nocte.

She continued the bath and Dover's powder until 24th, with but little benefit. On that day acupuncture was had recourse to; four needles were introduced, as in the former case, and repeated regularly on each alternate day for three weeks, with progressive amendment; and at the end of that time she found herself perfectly well, and was discharged cured yesterday.

The cases above detailed are merely offered as additions to the body of facts already before the public, illustrative of the good effects of acupuncture in rheumatic and neuralgic affections; and shew what it is capable of doing, even in those instances where the remedies usually resorted to have proved totally inefficacious*.

* The insertion of the preceding cases has been delayed by press of matter. We hope to hear from Mr. Dix again.—E.G.

MATERIA MEDICA AND PHARMACY.

To the Editor of the London Medical Gazette.

SIR,

I BEG leave, through the medium of your journal, to announce that the Laboratory and Museum of Materia Medica, at the London Ophthalmic Hospital, Moorfields, will be opened by me to the profession, generally, on and after the 2d of April next.

I am induced to offer this general invitation to the profession, from reflecting that the means of forming a judgment on the quality of drugs and medicinal preparations, are remarkably defective, and that, as a consequence, medical practice, however judicious in itself, is sometimes rendered abortive, or is materially reduced in the degree of success which would otherwise attend it, through the want of more information in regard to the quality of the medicines exhibited.

I have therefore arranged, for the inspection of such members of the medical profession, and especially of its younger members, as may honour me with a visit, specimens of drugs and medicinal preparations of the best quality I have been able to procure, in juxtaposition with specimens of inferior or spurious quality; and the relative contents of each, in quantity and quality, will be shewn analytically.

So far as my convenience may permit, I shall have great pleasure in adding such personal explanation as may be considered useful, especially with regard to mineral and vegetable poisons. In my absence, a competent person will be in attendance for that purpose.

I should be happy if, in this way, I should be so fortunate as in any manner to be of service to that profession to which I shall ever feel a grateful attachment.

The Laboratory and Museum will continue open to the end of the season for preparing narcotic medicines.

I am, sir,
Your obedient servant,
R. BATTLEY.

Ophthalmic Laboratory,
15th March, 1831.

NOTICE.

A correspondent is anxious to know what the Editor of the *Lancet* means by stating, in allusion to the riot at the College of Surgeons, that "the course to be adopted with regard to legal proceedings is not yet definitively settled." We presume the meaning to be, that he does not know whether the College may not proceed against him, instead of his prosecuting them.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

SATURDAY, MARCH 26, 1831.

A
CLINICAL LECTURE

ON
HOOPING-COUGH,

Delivered at the University Dispensary,

By DR. A. T. THOMSON.

Hooping-Cough as at present epidemic in London
—History of the Disease—Various Theories
regarding it.—Treatment: Antiphlogistic
Remedies—Emetics—Nitrous Acid Gas—Tar
Vapour—Antispasmodics (Opium, Belladonna,
Digitalis—Prussic Acid, &c.)—Rube-faciants
—Tonics—Change of Air—Vaccination (?)

GENTLEMEN,—The cases of hooping-cough that have lately presented themselves at this establishment, have attracted your attention by the unusual severity of their symptoms: this is the case also with those instances of the disease which I have attended in my private practice within the last month. I have therefore determined to offer to you some remarks both upon the theory and the treatment of this disease.

As no description of hooping-cough is found in the writings of the ancients, nor in those of the early physicians of this country until the time of Willis, who lived in the seventeenth century, we have reason for conjecturing that it is a disease of modern origin. It appears at every season of the year: in the warm months it is mild, and generally free from danger; on the contrary, in winter and spring, particularly in the month of March, when easterly winds prevail, it is severe and often fatal. For similar reasons, hooping-cough is a complaint of less serious importance in warm than in cold climates; but the severity of the symptoms depends also, in some degree, on the state of habit of the individual affected. Thus scrophulous subjects, plethoric and inflammatory habits, and those hereditarily disposed to phthisis, are more violently attacked than others, and the danger in them is greater than usual.

The first symptoms of hooping-cough, as you have heard in the history of the cases under treatment, resemble those of common catarrh, or rather those which mark the approach of measles. The patient is attacked with slight rigors, followed by febrile heat, lassitude, and a considerable degree of drowsiness; the eyes are somewhat suffused, the face is occasionally swollen, and the tongue is furred. If the fever increase, the bowels become irregular and are often costive; the skin is harsh and dry; there is head-ache; sometimes slight delirium; but these symptoms are much modified by the type of the fever—whether it resemble typhus or synochus. The cough, during this stage of the disease, is short and dry; but as the febrile symptoms abate, it makes its attack in regular paroxysms, the patient, during the intervals, except in severe cases, feeling as if he were in a state of health. These paroxysms of coughing are attended by the peculiar noise termed a *hoop*, which is undoubtedly the most striking pathognomonic feature of the disease, and by which it is immediately recognized even by ordinary observers. But it is important that the practitioner should be able to distinguish the approach of the disease independent of the *hoop*; and when it is advanced in its progress, to recognize it by those diagnostic characters, when the *hoop* does not occur, which enables it to be distinguished from other complaints attended with cough.

The cough which most resembles that of hooping-cough, independent of the *hoop*, is that which attends humoral asthma. In this complaint the cough occurs at intervals, in distinct paroxysms; the face becomes turgid and purple, and, when the expirations are violent, almost scarlet; the eyes protrude, and are fiery; the whole frame is convulsively agitated, and the patient appears as if about to expire from suffocation. The same symptoms characterize the paroxysms of coughing in hooping-cough; and in both diseases the paroxysms terminate by the expectoration of a quantity of viscid mucus;

not unfrequently by vomiting. So far the symptoms of both diseases accord: but, in asthma, that perfect state of quietude does not succeed the cough which almost always follows it in whooping-cough; on the contrary, the patient labours with dyspnoea, respiration is accompanied with a wheezing noise, and the patient, when much exhausted with the violence of the paroxysm, is forced to sit with his hands upon his knees, or, if standing, to remain in a prone posture until he recovers himself: whilst the countenance displays the severity of his sufferings. In whooping-cough the patient may be as greatly exhausted by the violence of the paroxysm of coughing as in asthma, but dyspnoea seldom, or rather never, except in those predisposed to asthma, follows the fit; and respiration is carried on as quietly during the intervals as in perfect health. The age of the patient also, in some degree, enables us to distinguish whooping-cough, when the hoop is absent, from asthma; for while the majority of cases of whooping-cough occur in childhood, asthma rarely makes its attack at that period of life.

There is no difficulty, after the paroxysms of coughing are formed, in distinguishing whooping-cough from catarrhal cough; but there is a spasmodic cough, sometimes attendant on teething, which is more likely to puzzle the young practitioner. This cough, however, quickly subsides on scariifying the gums, or on the protrusion of the tooth; which is not the case in whooping-cough, when it attacks an infant during the period of dentition.

In determining whether a spasmodic cough, recurring in paroxysms, but unattended by a hoop, be whooping-cough, you may be assisted by ascertaining whether the patient has formerly had the disease, as whooping-cough attacks a person once only; whether it be at the time prevailing as an epidemic, and whether he have been exposed to the contagion from associating with others labouring under the disease. There is no difficulty in recognizing the complaint when the hoop is present.

With regard to the prognostic which may be hazarded in whooping, it is sufficient to say, that we may anticipate a favourable termination of the disease when the paroxysms are moderate and recur at considerable intervals; when the skin remains moist, the extremities warm, and the head is unaffected after the febrile symptoms abate; and when the expectoration is easy and copious, and the paroxysm is attended with vomiting, followed by a craving for food. On the contrary, an unfavourable, or at least a doubtful prognosis may be hazarded, when the paroxysms are severe and frequent, especially if they are attended with hæmoptysis; when the febrile symptoms continue their progress after the paroxysms of coughing are

fairly formed; when there is frequent micturition; when a diarrhoea or a dysenteric state of the bowels supervene, and when convulsions occur. If symptoms of pneumonia also shew themselves, or if the paroxysms of coughing are terminated by gaping, as if the patient were in the act of suffocating, instead of the hoop, the prognosis cannot be favourable;—nor can it be so in those of plethoric or of apoplectic habits, or those hereditarily predisposed to phthisis; and it should be given with much caution also when whooping-cough is the prevailing epidemic. In pregnant females, liable to abortion, the prognosis cannot be decidedly favourable unless the disease be of the mildest description; for, in my own experience, I have seen the complaint, after miscarriage, assume the most untoward aspect, although it had been mild and free from danger prior to that event. The violence of the cough may induce hernia, in the predisposed; and consequently the hazard of strangulation of the gut occurring should always be kept in view, in giving our opinion of the termination of the disease in such subjects; and we should be equally guarded when it attacks those of a scrophulous diathesis, as affections of the spine, tabes mesenterica, and hydrocephalus, are not unfrequent terminations of whooping-cough. Under all circumstances, whooping-cough may be regarded as dangerous in the inverse ratio of the age of the patient; the hazard being undoubtedly greatest in infancy.

Although Stoll, and some other medical authors, have denied that whooping-cough is contagious, yet the experience of modern practitioners tends to confirm the opposite opinion. My own observation has left me nothing to doubt as to its contagious nature; for although I confess that, when a disease prevails epidemically, we cannot confidently pronounce that it is also contagious, yet every practitioner must have had opportunities of seeing the disease when it was not prevailing as an epidemic, and of observing it pass through families, and communicated from one family to another by intercourse with the infected. I conclude, therefore, that the disease is frequently the result of a specific virus; but whether this be exhaled from the lungs of the diseased and received into the habit of others to whom the disease is communicated by the same organs, I will not venture to affirm; for I am of opinion that the virus of disease, like any other poison, may be taken into the body by various ways, and yet produce its specific effect upon a particular organ. It is a weak argument against the contagious nature of whooping-cough, to assert that many who are exposed to its contagion escape with impunity. We know that the habit is not always equally susceptible of morbid impressions; or that a certain predisposition is requisite,

before any contagion can produce its specific effects on the body. That state of the human frame which is supposed to render it more susceptible of the virus of hooping-cough, is produced by whatever increases nervous irritability: worms, foul bowels, cold, measles, and dentition, are regarded as the *predisposing causes* of hooping-cough. Females, from the natural delicacy of their bodies, acquire the disease more readily, and suffer more than males.

What organ is the seat of the disease in hooping-cough, is still a question; the lungs, the larynx, the bronchi, the pharynx, the diaphragm, and the stomach, being regarded as such by different authors. Dr. Watts, whose Treatise on Hooping-Cough is undoubtedly excellent, conceives that the disease is an inflammatory affection of the mucous membrane of the larynx, trachea, and bronchi, and thinks that he is borne out in his opinion by the appearances of these parts on dissection; but, besides the fact that the stomach, in some cases, has been found as much inflamed as the mucous membrane of the air passages and cells, I am disposed to regard the inflammation of the mucous membrane of the lungs to be the consequence rather than the cause of the disease. It must, however, be confessed that it is as reasonable to suppose that a specific virus, applied to the mucous membrane of the air passages and cells, will produce inflammation there, and an increased secretion of mucus, as that such an effect is the consequence (which we know it to be) of the application of the virus of gonorrhœa to the mucous membrane of the urethra. But will the inflammation of the mucous membrane of the bronchi and air-cells of the lungs produce the peculiar cough of hooping-cough? That it will produce a cough, we are well aware; but we need scarcely remark that nothing can be more distinct than the cough of bronchitis from that of hooping cough; and although we can readily comprehend why there is a difference in the secretion of a mucous surface affected by a specific virus, and that of the same surface affected by simple inflammation, yet it is not easy to convince the mind that the modification of the stimulus in the same set of nerves should produce such a diversity in the cough, if the object to be accomplished in both cases be merely the expulsion of the superabundant mucous excretion.

Still imagined that the diaphragm is the seat of the disease; and that the vomiting at the close of the paroxysm proceeds from the spasmodic action of the diaphragm: but this opinion is unsupported by facts, and is therefore to be regarded as purely hypothetical.

Were I to venture to theorize upon this part of my subject, I should be more disposed to fix upon the stomach as the seat of

the disease, for the following reasons. The most striking pathognomonic symptoms of the complaint are, the peculiar spasmodic cough, the excessive secretion of viscid mucus in the larynx, and the vomiting which attends the paroxysms. Now supposing the stomach to be the seat of the disease, or the organ upon which the virus of hooping-cough exerts its specific influence; we know that disordered states of the stomach derange greatly the secretion of the larynx and bronchial tubes, and cause cough, by acting through the pulmonary plexus of nerves. In this case we can conceive it probable that the cough should assume a different character from that which is excited by simple inflammation of the mucous membrane of the air passages and cells; and if we imagine that the action of vomiting frees the stomach of that portion of the virus which is mixed with the preternatural excretion always present in it in hooping-cough, we may explain why there should be a complete secession of symptoms, or an interval of quietude, after each fit of coughing, until the virus again accumulate in sufficient quantity to renew the spasmodic cough. But this opinion is not less conjectural than those which have preceded it; and, however agreeable it may be to the mind to theorize, it very rarely leads to any useful inference.

Whatever may be the exciting cause of the cough, it is evidently spasmodic. The pectoral, the abdominal, and other respiratory muscles, are thrown into violent spasmodic action, and the diaphragm being forcibly pressed upwards, during the continued succession of violent expirations which characterize the cough, the lungs are almost entirely exhausted of air; so that, when the muscles are again relaxed, the external air, rushing in to supply the vacuum, produces that noise which is termed the hoop. This, indeed, resembles nothing so closely as the noise produced by the air rushing into the exhausted receiver of an air-pump, when the tube through which it is admitted is suddenly opened. The hoop, therefore, is a beneficial attendant of the cough, and is in every instance indicative of less danger than that gaping which has been already described as attending the paroxysm, and which sometimes, particularly in infancy, terminates in actual suffocation. As the disease declines in violence, the hoop gradually disappears, although, from habit, it occasionally recurs as an attendant upon coughs, long after the disease which gave rise to it has ceased to exist.

Hooping-cough, when mild, will run its course, and terminate, spontaneously, in health, without any considerable disturbance of either the lungs or the digestive organs. A question thence arises: is the morbid matter in such cases expelled, or does it exhaust itself, or become weakened, after a

certain period? It is not my intention to lose myself further in the mazes of hypothesis; and therefore I will not reply to these queries, but proceed to describe the method of treating the complaint, and point out in what particulars my experience accords with, or differs from, that of other practitioners.

In the treatment of hooping-cough, Cullen's method of dividing the disease into three distinct stages is highly judicious; each stage being marked with its characteristic features, which distinguish it from the others; and each requiring a distinct plan of treatment.

In the *first stage*, the treatment must be regulated by the type of the fever. Thus, although bleeding is proper when the excitement is considerable, or when the pulse is hard, small, and quick, and the breathing oppressed, indicating congestion, yet, as it is an acknowledged maxim that the symptoms of spasmodic affections are rather increased than diminished by the use of the lancet, it would be highly injudicious to bleed, unless such symptoms as have been just described clearly point out the necessity of abstracting a portion of the circulating mass. In my own practice I have seldom had occasion to employ blood-letting; but in some of the cases in which it has been requisite, the necessity was not limited to the commencement of the disease; and in one distressing case for which I was consulted some weeks since, bleeding, although it did not save the patient, yet greatly soothed his sufferings, and rendered the closing hours of life comparatively comfortable.

Nothing is so likely to produce that state which requires the use of the lancet in hooping-cough, as the imprudent exposure of the patient to sudden alternations of temperature; and therefore, when we consider also how much milder the disease is in warm climates, and in summer, the propriety of confining those labouring under it to one or two apartments, kept at a medium temperature, must be obvious. The custom of frequently changing the air was founded upon an erroneous view of the disease, and is now, I believe, rarely recommended until the disease have nearly run its course, when the change, operating as a tonic power, rapidly annihilates the cough, which sometimes continues, from the force of habit, in persons of weakened and irritable constitutions.

The early employment and repetition of emetics in hooping-cough is a judicious remnant of the old humoral practice in this stage of the disease. In infants, emetics free the stomach not only of the mucus from the trachea and bronchi, which is brought up in coughing and immediately swallowed by very young patients, but also, in those more advanced in years, they dislodge from it that preternatural secretion of mucus, which has

been already mentioned as occurring in this organ; for it is a well-known fact, that, through the connexion of the stomach and the larynx by means of the par vagum, nauseating medicines, rousing the stomach to discharge its contents by vomiting, loosen the adhesion of viscid mucus to the lining membrane of the larynx and trachea. Emetics also determine powerfully to the surface; and when the paroxysms of coughing assume an intermittent character, which is not unfrequently the case, the administration of an emetic at the moment when a paroxysm is expected, breaks the periodic habit, and facilitates the cure of the disease, on the same principle as in ague. I have, nevertheless, seen much mischief result from the frequent repetition of emetics in those of delicate and irritable habits; and when the stomach and the chest consent, if the expression be allowable, and the paroxysms are terminated by vomiting, the exhibition of emetics is not only unnecessary but highly detrimental.

Practitioners are divided in opinion with respect to the kind of emetic which should be employed. Some imagine that by the employment of squills and other nauseating expectorants, as emetics, a double indication is effected; but as the operation of all expectorants is through the stomach, on which they must produce nausea before the air-tubes can be relieved by them, those emetic substances are the best which are most easily limited in their effects; and consequently ipecacuanha, combined with small doses of tartar emetic, is preferable to every other emetic.

The promotion of expectoration is undoubtedly useful in this stage of hooping-cough; but, in very young subjects, it can prove beneficial only when accompanied with vomiting; and as emetics are not always advisable, other methods have been sought for to promote this effect. Among these I have seen the inhalation of both highly-diluted nitrous acid gas, and of the vapour of hot tar, tried with apparent benefit. The former was first tried by Mr. Patterson, surgeon to the Ferton Hospital, and is noticed in Dr. Carmichael Smyth's Report upon Nitrous Acid Gas; but the cases were too few to form a decided opinion of its powers; and in my own practice I have seen it used once only; in that instance the patient rapidly improved. Mr. Patterson employed it under the supposition that it might neutralize the virus in the air passages of the lungs, and thence render it inert, in the same manner in which it destroys contagious matter floating in the atmosphere; I used it with the hope of exciting the lungs to discharge the mucus with which, in the case referred to, they were completely choked up. It certainly produced the desired effect; and after the employment of it for three successive

days, the most striking improvement took place in the patient, who previously appeared to be sinking into his grave. I have had no other occasion for using the nitrous acid gas in hooping-cough, but I feel much disposed to recommend it in similar cases. I have employed more frequently the inhalation of the vapour of tar, in less urgent cases, and can bear testimony to its effects in promoting the expulsion of the glairy mucus from the trachea. I may here mention that I have lately found it equally useful in a very distressing case of asthma. The simplest method of extricating tar vapour is to put the tar in a pipkin capable of holding triple the quantity intended to be used, and placing this in a vessel containing sand sufficiently heated to keep the tar in a state of gentle ebullition: it promotes expectoration, which is followed by sleep, from which the patient awakes greatly refreshed.

In this stage of hooping-cough purgatives are necessarily exhibited when the excretions are not duly effected; but I must agree with Dr. Cullen in condemning their frequent employment.

In the second stage of hooping-cough, which may be regarded as commenced when the febrile symptoms have abated, and the cough returns in regular paroxysms, such as in the cases now under treatment in this Dispensary, the symptoms are to be combated by those medicines which, having sedative powers, allay the morbid irritability of the nervous system, and, consequently, act as antispasmodics. This class of remedies is extremely extensive; and yet the greater number of the articles which it contains have been, at one period or another, employed in hooping-cough; and although each has had its advocates for a certain time, yet many of them, either from the influence of fashion, which has a sway even over medical opinions, or from a conviction of their inutility, have fallen into disuse. The list is still sufficiently extensive; but I will notice those only of which I am able to speak from my own experience and observation.

The first of the tribe of narcotics, opium, has been extensively employed, but has generally been supposed to prove hurtful, by checking expectoration; this is true when opium is given alone, yet, in combination with nitrate of potassa and ipecacuanha, or tartar emetic, I have found it answer every indication. In some habits its effects upon the functions of the brain stand, certainly, in the way of its exhibition; but in these instances I have found the acetate of morphia prove beneficial; and were this remedy less expensive, it would, with the exception of prussic acid, render nugatory the employment of every other narcotic. I have given it, dissolved in the bitter almond emulsion, in doses of one-eighth of a grain, once in six or eight hours, to children five years old.

I have not found the same beneficial results from the use of the lactucarium, or of hyoscyamus, both of which have been highly extolled as sedatives in hooping-cough.

Belladonna has been very extensively employed on the continent, as an antispasmodic, in hooping-cough; and we might, *à priori*, augur well of its power from its general effects upon the nervous system. In Germany the root of the plant has been greatly extolled. It has been given, in doses of a quarter of a grain gradually increased to a grain, to children under one year of age; in doses of half a grain, at first, to children between the ages of two and four years; and in three-quarters of a grain to those above this period of life. I have had no experience in the use of the root, but my opportunities of witnessing the effects of the extract of belladonna have been numerous and satisfactory, and the cases now under treatment here will enable you, gentlemen, to verify the opinions I have to offer to you concerning it. I have generally given the medicine, at first, in doses of the tenth of a grain, to children of from two to five years of age; and, to insure the accuracy of the dose, have prescribed it in the form of pills made up with crumb of bread, which, as they are small, are readily swallowed in a tea-spoonful of pap or of gael. In combination with the extract of belladonna I have usually prescribed ten or twelve grains of the subcarbonate of potassa or of soda, and half a grain of powder of ipecacuanha, to be taken in an ounce of the bitter almond emulsion, between each dose of the pills. The result of this treatment has been the diminution of the cough, both as to violence and the frequency of its recurrence; and except in a few instances, which I am inclined to refer to idiosyncrasy, the plan does not appear to have been productive of the smallest inconvenience. When the dose has been too suddenly augmented, or when too large a dose has been given at first, it dilates the pupil, produces a paralysis of the retina, and a consequent temporary blindness, which continues two or three days after the medicine has been discontinued, but seldom occasions any other unpleasant effect. In one case, however, in which a boy, five years old, had taken the dose intended for his brother of nearly double the age, the head was singularly affected: a state of delirium, not unlike that attendant on mania, supervened; and although the attention could be easily roused, yet the mind immediately relapsed into its morbid state, and continued so for two days and nights, during which there was uninterrupted watchfulness. I generally continue the use of the belladonna, gradually augmenting the dose, until a scarlet eruption cover the skin, when I stop until this disappears. Whilst this eruption is out the cough ceases, and if it do not

soon subside, the habit is so much overcome as to prevent the recurrence of it with as much severity as before.

Digitalis has been given as a sedative in this stage of hooping-cough, but with various results. The unsuccessful instances, however, in my opinion, have arisen from the exhibition of the remedy under improper circumstances; nor do I think that the manner in which this powerful remedy operates on the animal economy is generally understood. *Digitalis* has been given to keep down the arterial action in hooping-cough, as well as in mania,—an effect which I am satisfied it produces in neither disease, unless it be given in large and nauseating doses, and unless the arterial excitement be previously lowered. When this has been effected, when the pulse is feeble, and the habit in a state approaching to that of debility or general relaxation, *digitalis* is a most certain and powerful sedative, calming nervous irritation, allaying spasmodic action, and inducing sleep. The striking effects of this article of the *materia medica* in mania, first induced me to employ it in hooping-cough, and in delicate habits I have found it answer my expectations. The form of the remedy which I have usually employed is the tincture, which I give, according to circumstances, in small doses at first, gradually increased to an extent much beyond what is generally imagined can be safely prescribed. Thus in hooping-cough I have carried the remedy to the extent of forty drops, three times a day, to a boy of eight years of age; and in adults, labouring under mania, I have given it, with the best effects, in doses of one hundred and ten drops, once in eight hours, for ten days successively.

Alkalies and the prussic acid act, nearly in the same manner, on the coat of the stomach, and through that organ on the general system. When taken into the stomach, their first effect is on the nerves of the viscera, the irritability of which they lessen in proportion to the extent of the dose, and communicate this effect by sympathy to the larynx. Prussic acid, in particular, is unquestionably the most powerful antispasmodic which can be employed in hooping-cough; and it has the advantage of being equally useful in every stage of the disease,—the due apportionment of the dose and its combinations enabling it to answer the indications to be attended to in every stage of the complaint. Thus in the first or febrile state, the prussic acid, given in medium doses of one or two minims to children of ten or twelve years of age, in combination with *ipecacuanha* and nitrate of potassa, moderates the fever; in the second or spasmodic stage, in larger doses, it allays the violence of the cough; and in the last stage, in small doses of a single minim, combined with infusions of bark, it aids the tonic power of the bark, by

allaying the irritability of the stomach, and thereby enabling the gastric fluid to be secreted more slowly, consequently in a more natural state, and better fitted for the purposes of digestion. In one of the cases now under treatment the dose is one minim only, owing to the great delicacy of frame of the child; but in the others the dose is two minims, repeated every fourth hour.

Musk, conium, the *sedum palustre*, and acetate of lead, have been used by different physicians, and have been extolled; but I have had no opportunity of forming an opinion as to the efficacy of any of them, except conium, which has rather disappointed my expectations in hooping-cough. I am well aware, however, that in the form of extract much depends on the preparation of the remedy; and even, in the form of powder, the manner in which the leaves are dried, and the powder is preserved, will greatly alter its influence as an antispasmodic.

Besides the employment of sedatives in this stage of the complaint, stimulant remedies are also prescribed, with the view of subduing the propensity to spasmodic action in the trachea, by exciting, as Dr. Good remarks, “a general or remote local revulsion.” But, unless as external applications, I have had no experience of the value of this class of remedies. The internal stimulants which have been employed in hooping-cough are cantharides, ammonia, ether, camphor, myrrh, the herb paris, and the *rhus vernix*. The external stimulants are camphor, garlic, ammonia, oil of amber, turpentine, tartar emetic, and tincture of cantharides, all of which I have seen beneficial, when employed in combination with oil or scap liniment, in the form of embrocations; probably producing their good effects by stimulating the dorsal and cervical nerves, which are those chiefly concerned in the function of respiration.

That period, in the progress of hooping-cough, in which the spasmodic state has somewhat abated, and the cough is kept up rather by habit than by the continuance of the operation of that virus which originally produced it, is regarded as its third stage. The frame of the body, and its powers exhausted by the previous diseased action, is morbidly susceptible of every impression which can keep up the spasmodic habit. In this stage, therefore, tonics are judiciously prescribed; and the preference is given to those which produce their effects most quickly, and are the least disagreeable to the palate. Cinchona has been employed for this purpose since the time of Sir John Floyer, who lived in the seventeenth century; it is now superseded by the sulphate of quinia, which can be given to children in the form of pills with as much facility as the extract of belladonna. I have employed the oxide and the

sulphate of zinc, nitrate of silver, iron in various forms, and the arsenical solution, as tonics in this stage of hooping, and feel some difficulty in determining to which I should give the preference. Perhaps the best of all tonics, at this period of the disease, is change of air; and this, in conjunction with ass's milk and the mucilage of the lichen islandicus, I have seen restore children worn down to skeletons, and rapidly becoming tabial, when no other human means appeared likely to save the little sufferers.

The diet in hooping-cough should be of a vegetable and farinaceous kind, until the second stage of the complaint be over; after which, light animal food may be allowed.

I have only further to notice that the hooping-cough is said to be cut short, in its progress, by vaccinations on the third week after the commencement of the hoop. This method of treatment was first suggested in Germany, and its efficacy is said to have been lately confirmed in America. Allowing that the observations of this influence of vaccination be correct, the remedy must always be of very limited utility, as it is not likely that vaccination should be delayed, with the risk of small-pox being taken in the interval, in order to keep it in reserve as a remedy for hooping-cough.

DESCRIPTION OF A NEW SHIELD PESSARY.

By E. W. DUFFIN,

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THE inadequacy of the various pessaries in common use, to reduce and retain the uterus, when prolapsed, in its natural situation, as well as the inconvenience and often injurious effects resulting from their employment, led me, some months ago, in consequence of a distressing case of prolapsus presenting itself to my notice, to devise the instrument which is now offered to the attention of the profession. In addition to the imperfect, uncertain support afforded by globular, oval, or ring pessaries, the dilatation of the vagina, and consequent relaxation occasioned by the distending pressure they exert against its parietes, are so many impediments in the way of effecting a radical cure of the disorder for the relief of which they are employed. In fact, mechanical means of this nature are regarded by all practically acquainted

with the subject as capable of affording, not only very partial relief, but upon a principle so objectionable that, to use the words of an eminent lecturer on midwifery, "they should be our last resort." There are many cases, moreover, in which the pessaries in common use cannot be worn, in consequence of the tenesmus, constipation, and ardor urinae, arising from the pressure they exert on the rectum and urethra. Nor are there wanting examples wherein inflammation and sloughing of the parts, followed by fistulous openings into the rectum and bladder, have resulted from the same causes*. The removal of the instruments just mentioned, either for the sake of cleanliness or on any other account, when they fit tightly, (and unless they do so they are comparatively useless,) is often an operation of some difficulty, and productive of considerable pain to the patient, who is usually under the disagreeable necessity, on such occasions, of having recourse to the assistance of her medical attendant. If not regularly withdrawn they may become impacted, and thus retain, as well as by the irritation they produce derange the secretions, so as to cause the parts to exhale a very offensive odour that seldom fails to be a source of disgust, particularly to unmarried females, and such as to induce them to abandon their use. The stalk pessary, though exempt from most of the foregoing objections, is still, as usually constructed, a very imperfect instrument, which, for want of an unyielding fixed base to rest upon, affords but a vacillating and unsteady support. Besides, the extremity of the stalk, being secured only by two pieces of tape to a ceinture, is wholly unprotected from any impulse that may be accidentally applied to the external parts, and the friction occasioned by the stalk against the ostium vaginae in irritable habits, often occasions a degree of excitement very annoying to the wearer. Now the pessary delineated in the woodcut, a modification of the stalk pessary when properly made, and of a size proportioned to the passage in the individual case, not only enables the surgeon to replace the uterus most accurately, and to retain it *in situ*, but, by means

* Vide Dict. des Sciences Medicales, art. Pessaire.

of the graduating screw (A), allows

Fig. 1.

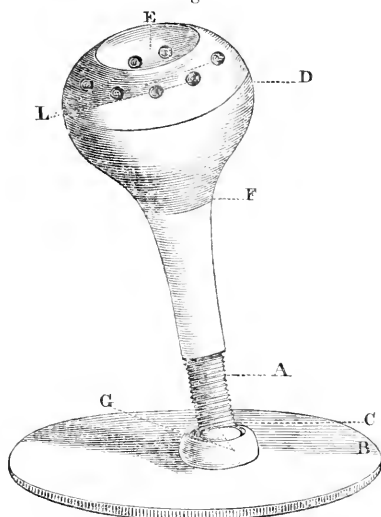
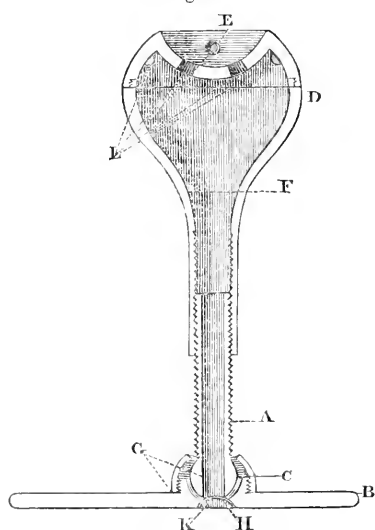


Fig. 2.



him to accommodate the length of the stalk to that of the vagina as the cure advances, which is of some importance in cases of long standing, where a complete reduction cannot be effected at once. The shield, B, being pressed externally against the perineum, and perineal part of the labia, and retained firmly in that situation by the ap-

plication of a thick T bandage of cotton, to which it may be attached, to prevent it from slipping, supports steadily, through the medium of the head and stalk, the weight of the prolapsed organ, and obviates all vacillation of the extremity of the stalk, C. The head, D, containing the cup, E, of the instrument, being of a size adapted to that of the vagina in the particular case, and hollowed in proportion to the magnitude of the parts it has to receive, will afford support without producing either irritation, injurious pressure, or dilatation; and if the head be made to unscrew at F, as the vagina contracts to its natural dimensions, a smaller one can be substituted. The ball and socket-joint, G, admits of the instrument accommodating itself, and affording the same steady support, under every change of posture the patient may assume, and at the same time will materially mitigate the violence of any jarring impulse that might be accidentally communicated from without. As at this joint the shield and stalk are connected to each other, all undue excitement likely to arise from friction, were the latter unfixed, is prevented. The pessary being hollow, and open at the extremity of the stalk, H, the shield also at this part, K, being perforated, admits of our injecting, by means of a syringe or India-rubber bottle, any astringent lotion to assist in strengthening and restoring the relaxed parts. The fluid will issue out at the perforations, L, in the head of the apparatus, and be thus more immediately and thoroughly applied than it can be in cases where a common pessary is worn.

All females object to the use of mechanical support introduced into the vagina for the cure of prolapsus uteri; hence we must expect to have as many imaginary difficulties to overcome on first employing this, as we meet with in the application of any other similar means; but when these, as well as the unpleasant mental impressions, and actual uneasy sensations, produced by the existence of a foreign body in such a situation, have been successfully combated, it will be found that the instrument, in many cases, is peculiarly adapted to fulfil the object for which it is designed, and, I am happy to say, has met the approval of several practitioners of eminence who have examined it; amongst these I may

mention the names of Drs. Charles Clarke, Blundell, Henry Davies, and Robert Lee. I at first tried the instrument without a joint, but found some contrivance was requisite to obviate the jarring that arose from certain occasional motions of the body. The joint was therefore placed at the junction of the head and stem, F; but experience proved that the head then became too unsteady, and, by tilting to one side, allowed the uterus to prolapse equally as when no instrument was applied. Dr. Blundell afterwards did me the favour to shew me the contrivance he usually employs, the *pessaire à bilboquet* of the French, with a joint at the extremity of the stalk; this suggested to me the change I have since made, and which, if I may speak from a short trial, appears likely to obviate the difficulties my first plan opposed. When the margin of the os uteri and cervix, or neighbouring parts, are in an irritable or subacutely inflamed condition—a state that is often found to exist during the first stage of prolapsus, denominated *relaxation*—it need hardly be remarked that the patient cannot bear the application of any mechanical agent. Such a state of the parts must be first overcome by rest, or perhaps some weeks' continuance, in the horizontal posture, aided by depletive and other antiphlogistic measures, before a pessary can be worn, and even then its adoption requires to be very gradual, the patient wearing it only for an hour or two at first, a few minutes additional being gained each day, so that the parts may become insensibly habituated to its presence. It will also be found necessary to place a dossil of flock cotton, or a piece of fine sponge, in the cup of the instrument, for the uterus to rest upon, otherwise the hard wood will at first be productive of pain. Care must also be observed in adjusting the length of the stem, lest the head, by pressing too forcibly against the sustained part, raise the womb beyond its natural height, and painfully stretch the vagina. The objection urged by those who have not employed the instrument is, that the shield will be found very inconvenient when the patient is desirous of attending to the calls of nature. Those who have actually worn it, however, make no such complaint. Besides, it is a very easy matter to limit the periods of attending to these calls to morning and

evening, before the instrument is introduced for the day, for there is no occasion to wear it when in the horizontal posture, or after it has been withdrawn immediately before getting into bed. The shield, moreover, even whilst the pessary is introduced, can very easily be moved either backwards or forwards, sufficiently to remove all obstacle it might otherwise offer, without in any way altering or unsteading the support, and the patient will not object to a little trouble to get rid of a distressing complaint of such a nature. In addition to cases of relaxation and prolapsus, where the uterus is *not very low down in the vagina*, and for the restoration of which this pessary appears more peculiarly adapted, there is another distressing condition of this organ, in which a support of such a nature will afford great relief—viz. in enlargement of the uterus, from the development of fibro-cartilaginous tumors within its substance, where the weight is considerably increased; so that, although there exist little or no displacement, the dragging of the ligaments produces a degree of uneasiness very intolerable, and subjects the sufferer to frequent attacks of inflammation of these parts. Now the globular, or ring pessaries, afford no support in cases of this kind, nor in the first stages of prolapsus or relaxation: they cannot be retained sufficiently high up in the passage to effect reduction, when the displacement is only trifling. It is true, that slight displacement, if the patient be confined to the horizontal posture, and employ proper general and local remedies, may often be cured without the use of any mechanical support; but let it be remembered, there are patients who either cannot, or will not, be confined to the bed or couch, in whom the disease, if the organ be not early supported, gains ground, and ultimately becomes very distressing. The pessary will answer the purpose best if made of ivory; but where economy is an object, the head and shield may be constructed of box-wood, the stem and joint of ivory, of such materials as that represented in the wood-cut, the price of which only amounts to a few shillings. As the size of the sustaining part requires to be varied according to the state of relaxation of the vagina, it is desirable, in adapting the instrument, to have several heads capable of being

screwed to the same stalk, the diameters of which may range from one and a half to three inches. The instrument may be procured of Messrs Stoddart, surgeons' instrument makers, No. 401, Strand.

3, Foley-Place, 14th March, 1831.

COLCHICUM IN RHEUMATISM.

To the Editor of the London Medical Gazette.

Dover, March 15, 1831.

SIR,

As a constant reader of your valuable Gazette, I avail myself of its pages to communicate to my medical brethren a few remarks regarding the exhibition of colchicum in rheumatism.

I do not purpose to enter into the examination of the peculiar action of the remedy, but merely to allude to a mode of exhibition which has proved remarkably successful in my own as well as in the hands of others.

On perusing those cases of rheumatism which have been treated with colchicum, I have very generally remarked, that as soon as purging has been produced, this medicine has been countermanded, and the consequence has been at most a palliation of the disease, and frequently discredit as to the utility of the drug in the treatment of it; whereas, the peculiar virtues of the colchicum are very seldom to be obtained, unless that very effect has been produced: the observation of this fact has led to the combination of this plant with medicine possessing active purging power, and the form which has proved so successful to myself as well as others, is the exhibition of the vinum colchici in an ordinary saline aperient draught, consisting of infusion of senna with Epsom salts, to the extent of half a fluid drachm every four or six hours, till the bowels are very freely acted on. This rarely fails in alleviating the pains in a remarkable degree, and if a moderate action be maintained on the bowels by lessening the dose, or observing longer intervals between each, a speedy cure usually results from this plan. Slight rheumatic pains are often allayed by a single dose, and it rarely happens

that a patient is too weak to bear its operation.

The wine employed by me is made according to the last edition of the London Pharmacopœia, by macerating a pound of the fresh bulb in twelve ounces of very dilute spirit. I am the more anxious to make this remark, because Dr. Thomson, by a strange error, in the fourth edition of his London Dispensary, has made the proportion as one ounce of the root to sixteen of the menstruum, and I happen to know that some druggists are in the habit of using the translated Dispensary in preference to the Latin formulæ of the Pharmacopœia.

Dr. Elliotson, in a recent number of your Gazette, has made a similar statement as to the use of colchicum in rheumatic inflammation: he observes that he seldom finds any benefit from it unless purging be induced.

The cases which have been treated by this plan, have been some of an acute, others of a chronic form; and very seldom has it become necessary to premise either general or local blood-letting, though of course I am far from wishing either of these means to be neglected in cases which require depletion. One particular advantage appears to me to result from this mode of administration, viz. that the colchicum, which by repetition so frequently disagrees with the stomach, produces its full effect speedily, so as to render its continued exhibition seldom necessary. Some few persons cannot retain it on their stomachs in any form, and then it might be advantageous to exhibit the hydrocyanic acid either in combination, or some time before giving the colchicum.

My only object in troubling you with this communication is the conviction of the superiority of this mode of administration over that generally pursued: should it prove as useful in the practice of others as it has in my own, my end in alleviating human suffering will be fully attained.

I am, Sir,

Your most obedient servant,
C. D. I. LOWDER, M.D.

REMARKS UPON STAINS OF THE CORNEA.

By J. B. ESTLIN, F.L.S.

To the Editor of the London Medical Gazette.

SIR,

THE stock of medical knowledge would be greatly increased if those practitioners who, from extensive observation, have the means of forming decided opinions upon any particular points of practice, were more frequently to communicate their inferences to the public. Those who had neither time nor ambition to get up an elaborate treatise, might thus, perhaps, quite as usefully contribute to the advancement of their profession.

It is with these views that I am induced to add my mite to a discussion commenced in your pages relative to the effect of nitrate of silver, in leaving an indelible stain upon the eye.

I was not less surprised than your correspondent, Mr. Hunt, at the manner in which Dr. Jacob (of whose abilities I have had private opportunities of hearing) speaks of the frequent occurrence of permanent marks upon the eye from the use of the nitrate of silver, and I could not but wonder at his disparagement of that valuable remedy.

Mr. Hunt, in your number for Feb. 12th, has ably detailed his opinion of the advantages and safety of this application. To his testimony in its favour, I beg to add mine.

For nearly twenty years I have been extensively engaged in the treatment of disorders of the eyes, and, exclusively of private practice, have had the management of fourteen thousand cases of these complaints at a public institution. The frequent occurrence of an ulcerated condition of the cornea is well known to those who are familiar with ophthalmic practice. In all such cases it has uniformly been my custom to employ the nitrate of silver, either in substance or solution; and I can state positively that I have never seen a single instance of any stain being left upon the cornea in consequence of this application; nor can I believe that this event has escaped my notice from its occurring in patients whom I have not had an opportunity of seeing after their recovery, as I have

constantly under my care whole families, now grown to men and women, whom I attended as children with ulcers on the cornea, and in whose cases I used the lunar caustic. Ulcers attended with much irritability, I touch with the preparation in its pure state. The solution I usually employ is in the proportion of two grains to an ounce of distilled water.

Only one instance has occurred to me of the livid stain upon the palpebral and sclerotic conjunctiva; and this presented itself to my notice about a week before I met with Dr. Jacob's paper in your publication. This case was that of a gentleman to whom I had recommended many years ago a weak solution of the nit. arg. in consequence of an obstruction in the left nasal duct, attended with an accumulation of purulent matter in the sac. The conjunctiva covering the scleroticæ, and lining the palpebræ, was deeply stained. I found that my patient had been in the habit of frequently using the preparation ever since I had prescribed it, but that he had considerably increased its strength—in what proportion, however, he was unable to inform me. Conspicuous as the deformity was, he did not regret it, so great was the advantage he derived from the remedy in removing pain and inflammation when they occurred, in diminishing the morbid accumulation, and in averting threatening abscess of the sac. I recommended him, however, to omit the nitrate for some time, for the purpose of ascertaining if the stain would disappear, and to employ in its stead a solution of the sulphate of alum.

Whatever be the opinion of others on this subject, I am satisfied, from its employment in many hundred cases, that the nitrate of silver is a most valuable—almost a specific application in many diseases of the eyes; and that they who are persuaded by any authority not to employ it, will be depriving their patients of important curative means.

Contrary to Dr. Jacob's opinion, my experience has led me to the conclusion that the cornea is very unsusceptible of retaining the discoloration of any extraneous substance. Though injuries of the eye from gunpowder are constantly coming under my notice, in which the scleroticæ retains the blackened marks from the grains of the powder, I have no recollection of ever

having seen such left upon the cornea after all inflammatory action had subsided. Nature appears to make great efforts to preserve and restore the transparency of this texture, so important to the function of the organ. All surgeons must have noticed this in sloughs, wounds, &c. of the cornea. Numerous are the instances I see in the course of a year of the stains produced by the oxidation of fragments of iron which have been forcibly driven into the cornea in persons employed in the foundries and other iron-works in this city; yet it is very rarely that I meet with the least degree of permanent stain upon this membrane. So satisfied am I that the particles occasioning the mark will be speedily absorbed, that on extracting the scales, &c. I am always contented when the piece is removed, and though a considerable brown mark may remain, I do not irritate the eye by scraping it off. When the fragment is removed, the point in which it was imbedded will often appear transparent, surrounded by a ring of dark stain. When I see this, I always feel assured that the extraneous matter is sufficiently removed, and that the mark will disappear.

Not only in ulcers of the cornea, and diseases of the tarsi, do I find the lunar caustic efficacious; it is peculiarly serviceable in protrusions of the iris, either from ulceration or wounds of the cornea, particularly in those protrusions which occur after the extraction of the cataract. In many instances of protruded iris it will be found that the prolapsed portion is kept in a state of considerable projection by the pressure of the aqueous humour behind it. I have repeatedly seen a gradual absorption of that part of the cornea where the wound is situated, taking place from this pressure. In such cases it is an important point in practice to puncture the prominent portion of the iris with a cataract needle, or to cut it off with fine scissors. The aqueous humour thus escapes, the distended iris collapses, and the closure of the wound is expedited by the careful application of the caustic.

In applying the pure nitrate of silver to the eye, it is requisite that it should be finely pointed. It may appear trifling to describe the mode of giving it a fine point, and yet it may be acceptable to some of your readers to know how to do it with facility. The small rolls of caustic are best for

the purpose. After securing a bit, about half an inch in length, in a quill, I double up once or twice a piece of brown paper, moisten the edge of the paper with saliva (which is a very powerful solvent for this preparation), and then rub the end of the caustic upon the wetted edge of the paper until it has acquired a point as fine as that of a black-lead pencil. When the cornea has been touched with the caustic, it is necessary to wipe the latter dry before it is applied a second time, as the moisture from the eye so readily softens the caustic that more would remain upon the cornea than would be safe upon a repetition of the application. The point can always be kept in proper condition, if, after using it, the nitrate be immediately wiped, by a twisting movement, upon a piece of soft paper held between the finger and thumb of the left hand.

I would remark, in reference to one of Mr. Hunt's observations, that, in granulated lids, I have found the efficacy of the nitrate of silver of less permanency than that of the sulphate of copper.

I am, &c.

JOHN BISHOP ESTLIN.

Bristol, March 10th, 1831.

CASES ILLUSTRATIVE OF VARIOUS DISEASES OF THE NERVES,

From MR. BELL's work on the Nervous System.

[Concluded from p. 534.]

CASE VII.—*Spasmodic Action in the Sterno-cleido-mastoideus and Trapezius Muscles.*

— This gentleman is distressed with a spasmodic affection of the side of the neck. By the death of a relation he was involved in harassing family disputes, under which he is sensible his mind has suffered. Although enjoying good health, he has been subject to bilious attacks, and has had a discharge from his left ear.

When coming into the room he presents exactly the same appearance as the farmer who lately left me. He supports his head with his hand, and seeks relief as soon as possible by propping his head against the wall, or by letting it fall over the back of the chair, supporting the occiput with the hand. He complains that his face is forcibly drawn

round to his shoulder. His sterno-cleido mastoideus muscle, during this state of constraint, is as hard as a board; but when the paroxysm is at the worst, and when the mastoid process is drawn towards the sternum, he can by volition, and in a temporary manner, relax the muscle and poise the head equally; but this is for a short time only; the uncontrollable action of the muscle returns and drags down the head, twisting the face to the left side, and pitching up the chin. A rigidity of the right side of the neck, attributable to the lateral portion of the trapezius, shews that that muscle partakes of the spasmodic action. There is no complaint of the side of the chest, nor difficulty of breathing. The agitation of riding over the stones makes him worse. When he is lying down, and when his head is propped with pillows, it remains almost quite still. The pain in the back of the neck appears to be rather the effect of continued exertion than of any thing inflammatory. When the paroxysm is severe, the convulsion extends to the muscles of the larynx, and he makes attempts as if it were to get rid of something which was producing a huskiness in his voice. When he supports his head and is at rest, the act of drinking brings on the paroxysm.

He is at perfect rest only when he is asleep.

CASE VIII.—Case analogous to the preceding (communicated by Mr. Alexander Shaw.)

Thomas Brown, æt. 58, a shoemaker, in Ayr, has suffered for nearly three years from a spasmodic affection of the muscles of the neck and shoulder. A year or more previous to his being attacked with this complaint, his health became broken, which he says was owing to his being addicted to drinking, and reduced to a state of great poverty. He first perceived a stiffness in one side of his neck; he had also a weakness in the left half of his body, but he did not lose the command over the parts thus affected. The spasms in the neck came on suddenly, and they were at the beginning very nearly of the same kind as they are now.

During each of these spasms his head is drawn down gradually, and by successive actions, so that the left side of his face comes almost in contact with his shoulder; but there is, in addition,

a rotatory motion of the head, by which the chin is turned round and tilted obliquely upwards, towards the opposite side. His head is thrown back on the nape of his neck, his mouth is drawn open, and the whole of the left side of his face is twitched with a succession of frequent convulsions; the shoulder on the same side is elevated, and the arm is thrown forwards across the body when the head is thus drawn down. These spasms are repeated ten or fifteen times in the course of a minute. At intervals during the day the same paroxysms come on with increased severity. Then the convulsions of the face and neck are of the most violent kind: his arm and shoulder are shaken backwards and forwards with a kind of shuddering motion, and with amazing rapidity, so that the whole body partakes of the tremor. While these very severe fits last, which is for about a minute each time, his breathing is performed with difficulty, and he gasps as if he were suffocating; altogether he exhibits the appearance as if he were submitting to the most extreme suffering. During the course of the day he is attacked frequently with these violent paroxysms, but he cannot assign any reason for their being brought on at one time more than another.

On examining him when the usual spasms were taking place, the left sterno-cleido-mastoid muscle was distinctly larger and more prominent than the other; and it became hard and round when the spasms occurred. It appeared that the anterior fibres of the trapezius were likewise firmly contracted when the spasms took place, but the condition of this muscle was not so easily ascertained as that of the other.

He has a constant pain in the left side of his neck, principally seated at the mastoid process of the temporal bone, but extending also along the course of the clavicle. He said it was long before he fell asleep at night, owing to his head shaking against the pillow. When asleep, his friends have told him that his head lies perfectly still; and in speaking of this, he expresses the regret which he feels each morning when he awakes, being conscious that his sufferings were immediately about to begin again. He is able to walk about the town. Various remedies have at different times been tried, but without producing any perceptible benefit.

CASE IX.—*Spasmodic Affection of the Neck.*

Francis Barney, a healthy man, 27 years of age, by trade a blacksmith, was in February last seized, without a previous illness, with a spasmodic contraction of the muscles of the neck. The spasms were slight for a few weeks, but they have since been severe and frequent, though not permanent. During the contraction, the face is forcibly drawn to the left side; and it would seem, that the clavicular portion of the sterno cleido-mastoideus is alone affected, or at least more especially. To give some idea of the violence of the spasms, I only need say that all the power a strong man can exert is insufficient to counteract them. Although this spasmodic affection has now continued for nine months, without any material alteration, the patient's general health does not appear to have suffered. He was not under my care until July, but from the gentlemen who attended him I am informed that the treatment, in the first instance, consisted of general and local bleeding, free purgation, afterwards mercury, followed by antispasmodic stimulants of turpentine, &c.; irritating applications had also been applied to the antagonist muscle, with the hope of exciting a stronger action, and counteracting the spasm of its opponent. I have never thought this spasm owing to a want of power in the antagonist muscle, but have rather apprehended that it depended upon an affection of the accessory nerve, and had consequently no great expectation from medical treatment; but having witnessed decidedly good effects from strychnine in partial paralysis, I thought it deserved a trial in this intractable case; it was therefore prescribed; at the same time a large seton was inserted in the neck. The strychnine was continued for a month in full doses, producing its usual effect, but no real benefit. He afterwards became a patient in an infirmary, where he derived no advantage whatever. Some attempt has since been made to keep the head steady by mechanical means.

CASE X.—*Case of Wry Neck (communicated by Dr. Arnold Knight.)*

“— About December 1827, Master — was seized during the night with a stiff neck; it excited little attention;

he played with his schoolfellows as usual, some of whom playfully, but rather rudely, twisted his head in a contrary direction. When he returned home at the Christmas holidays, I was requested to see him. I found his general health very much deranged, and his sterno-cleido-mastoideus muscle on the right side rigidly contracted. Leeches and fomentations were applied to the mastoid extremity of the muscle; alterative medicines were prescribed; strict attention was paid to the bowels; and after some weeks his general health very much improved: still the muscle remained as rigid as ever. During the summer, his father took him to London, and you were consulted. I believe he was advised to go to the sea, and a steel apparatus was recommended. The sea, I understood, was of service to him; but as the apparatus did not improve his neck, and injured his back, it was, after some weeks' trial, laid aside. A vigorous system of shampooing was then adopted, together with very active exercises. His health improved; he grew taller and stouter; and by a great effort he could stand straight: but the moment he relaxed his efforts, his chin turned towards his shoulder, his spine became curved, and he relieved himself by resting on one leg.

“All remedial measures were at length abandoned, and this last half year he was sent to school. His general health has continued good, but his sterno-cleido-mastoideus is just as it was.

“Mr. — has requested me to correspond with you respecting his son; I presume, to learn whether, from my description, and your notes or recollection, you have any further plan to propose;—whether you would recommend any division of the muscle, or whether, before giving any further opinion respecting him, you would wish to see him. In the latter case, I believe his father would immediately take him to London.”

This young gentleman is gradually improving by shampooing and proper exercises, which put the muscle on the stretch.

CASE XI.—*Wry Neck, as distinguished from the preceding Spasmodic Affections.*

The wry neck is a different com-

plaint from these spasmodic affections of the mastoid muscle.

Note.—Sir — has been brought to me under the idea that he has disease of the spine, but from his appearance in coming into the room, I saw that the character of the distortion was entirely different from that produced by disease or weakness of the spine. I soon discovered that his manner of holding his head was not a habit, as the family supposed, but an inevitable consequence of the state of the sternal portion of the mastoid muscle. The head is not inclined to the left shoulder as if it were equally drawn, or had fallen, from the paralysis of the muscles of the opposite side; the ear is twisted to the shoulder, the chin pitched up, and the shoulder of the affected side is higher than the other. This appearance immediately drew my attention to the sterno-cleido-mastoidens muscle, when I found that the portion of it which runs from the sternum to the mastoid process was as firm and unyielding as a cord, and checked the movements of the head.

The distortion of the neck and shoulder arose from the accommodation of the vertebrae to the state of the mastoid muscle; and from the same cause arose the inequality of the shoulders, since the rigidity and shortness of the sternal portion of the muscle was in part relieved by the elevated position of the clavicle, just as by the depression of the mastoid process.

This disease is a degeneration of the fibres of the muscle into a tendinous texture. It is relieved, however, by proper exercises and the shampooing of the muscle.

ROYAL INSTITUTION.

Friday, March 18, 1831.

WHITLOCK NICHOLL, M.D. VICE-PRES.
IN THE CHAIR.

Mr. Ritchie on Elasticity, and especially the Elasticity of Torsion; with its Application in delicate Experimental Research.

MR. RITCHIE introduced the subject proposed for discussion with some general remarks on the elasticity of bodies in general, to render more intelligible his experiments on the great elasticity of threads of glass. To state his argu-

ment in a few words, elasticity is that property with which various bodies are variously endowed, so that they yield when subjected to external powers, and recover their former state when the force to which they yielded is removed. Thus a body by pressure may have its bulk diminished; by extension may have it increased; or by twisting may have its form affected: the application of force being made in these three several ways, and when the force becomes removed the body resumes its previous condition. Hence elasticity is of three kinds: first, that of compression; secondly, that of tension; thirdly, that of torsion. Aeriform bodies exhibit the elasticity of compression in an eminent degree: thus, if in a curved tube of glass, like the letter *b*, a certain portion of air be confined in the short leg, closed at the end, by pouring in a small quantity of mercury, so as just to cut off the communication of the shorter with the longer limb, and to stand at equal heights in each; then the air will, at this, the common atmospheric pressure, occupy a certain space: but if mercury be poured into the long leg, to the height of thirty inches, then the air confined in the short leg will be subject to the pressure of two atmospheres; if to the height of sixty inches, a pressure equivalent to three atmospheres, and so on: and the air will, at each additional atmosphere, be compressed so as to occupy a smaller space, and as the pressure is removed so will the air again equally expand, and in both cases in equal degrees for equal degrees of pressure added or removed. This law with regard to air holds true even to the extent of fifty or sixty atmospheres, as experiments have proved; but when gaseous bodies are about to assume, through compression, the liquid form, it is believed that some variation must occur.

Now what is evident to all, and can easily be measured in so elastic a body as air, exists likewise, though in a subduced ratio, in fluid and in solid bodies likewise; and as a column of air, so can a column of wood, or metal, or glass, be made longer or shorter by placing a weight upon them, or attaching it to the lower end of such pendent bodies; and they will become longer or shorter exactly in proportion to the weight attached, and their increase or diminution will be equal for equal in-

creasements of weight or other force applied: and again, when the power applied is removed the columns will resume their previous state. The elasticity of tension is most easily demonstrated and measured by placing a rod or wire between two fixed points, and then adding weights to a scale suspended from the centre of the rod or wire, the elasticity of which is to be tested. But it is found that there is a limit to this elasticity of tension and compression, for if too great a weight be employed, the body will not, when it is removed, return to its former state, but will remain permanently lengthened or shortened, and this varies in different bodies; *e. g.* the elasticity of copper is sooner destroyed than that of brass, brass is less perfectly elastic than iron, iron than steel, and so on.

Now what is true of the elasticity of tension and compression, is true of the elasticity of torsion likewise; for, if a wire of metal or a thread of glass be twisted, it will endeavour to return, and on the power being removed it will return to its former state, and with a force equal to the force by which it was twisted, so that the degree of torsion, which can be read off when an index is applied, will give a ready mode of ascertaining the power present; and hence it has been ingeniously applied to the construction of certain delicate philosophical instruments, such as the torsion galvanometer, the balance of torsion, &c. &c. But as in metals the elasticity of torsion, like that of tension, may be destroyed by the application of too great a force, errors might unconsciously creep into calculations founded on such experiments: and hence the superiority of glass; for Mr. Ritchie has proved that threads of various degrees of fineness, which may be regulated, as well as their length, to suit the delicacy of the experiment to be tried, hold an unvarying ratio in their degrees of torsion to the force applied, and their elasticity cannot, as in metals (where the tenacity is greater) be destroyed without breaking the thread, so that the source of error above alluded to is avoided.

Upon the elasticity of threads of glass, especially on the torsion of such threads, Mr. Ritchie has instituted many laborious inquiries, and constructed some very delicate and beautiful instruments,

several of which were this evening exhibited. One was designed to measure the power of galvanic batteries, the force of the same or different electricities, &c. and another to weigh exceedingly light bodies, by which it would appear that the 1000th, or even the 10,000th part of a grain, might be accurately weighed, so that some speculative philosophers have ventured to surmise, that hence we may be enabled to ascertain the weight of the ultimate atoms of matter;—when found, of course, for we presume that the first section of Mrs. Glass's famous receipt will here be a needful preliminary, viz. "First catch," &c.

In the library were living specimens of the ground parrot, from the Australian islands, and various preserved ornithological rarities from the Himalaya mountains, furnished by the Zoological Society. Numerous works of art—such as busts of Shakspeare and Ben Jonson, presented by Mr. Britton; Parker's bronzes of the King and the Lord Chancellor; wax models of many of the West Indian fruits, from the Reverend C. Hotham; a really beautiful painting on glass, copied by a native Chinese named Fatqua, now dead, from the engraving of King John signing Magna Charta, &c. &c. Also, Mr. Bourdon's self-acting siphon, which is an ingenious instrument always ready for use without the trouble of exhaustion. It is, in truth, a double siphon, two of the legs of which are joined, so as to form a loop, which loop of course always remains full of liquid, and when wanted for use, the air contained in the leg, which is plunged into the fluid to be drawn off, is thus so far compressed as to force some of the water out of the loop, which, by its gravity, falls through the long or waste leg, hence tending to form a vacuum behind it, which causes the remaining fluid in the loop to follow; and the consequence is, that the exhausted loop draws up the liquid out of the vessel to be emptied, and after it is once in action, the progress is just that of the common siphon. Mr. Bourdon also exhibited "a pump-lamp," of so extremely complicated structure, that, although very ingenious, it can never become of any practical advantage: it seemed to us merely an illustration of how very complex simple things can be made by a clever man.

THE PYRAMID CEMETERY.

[WE have been requested by Mr. Willson to give publicity to the following illustrations of some points connected with his Pyramid. In our opinion, he makes out the fact of the comparative economy of his plan with much clearness and accuracy of demonstration. The base of the intended structure, it is to be recollected, is eighteen acres; which being multiplied by the several stages (ninety-six, we believe, in all) will obtain nearly 1000 acres from the unoccupied atmospheric space, as the work proceeds upwards above the earth.

It is a tremendous scale to begin upon, but the magnitude of it, upon a little reflection, will be perceived to be one of its strongest recommendations. Some persons who approve of the plan generally, but are deterred by its vastness, have suggested that it would be as wise, if not wiser, to be more moderate at the commencement, and to try the efficacy of a smaller scale: suppose, for instance, a base of one-fourth the dimensions of that in contemplation. Such a plan, Mr. Willson contends, would be not only futile but extravagant. But we shall leave Mr. W. to state his own objections.—E. G.

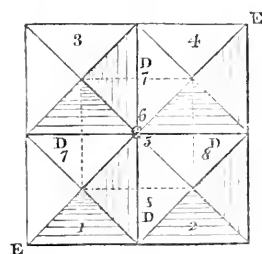


Fig. 1.

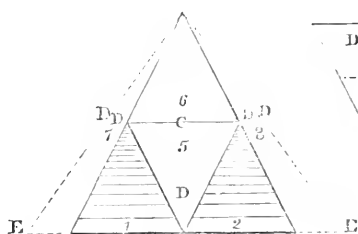


Fig. 2.



Fig. 3.

Fig. 1 (the plan), describes four pyramids of half the diameter of Mr. Willson's engraved plan, and shews that the vacuity between them, at C, will contain, in addition, other four such sized pyramids, on the same foundation; proving that the foundation, which is requisite for the four, is sufficient for the construction of eight of similar dimensions, if erected together under one apex; and consequently, that the greatest economy of the Pyramid mainly depends upon its magnitude.

Fig. 2 (the elevation), describes pyramids 1, 2, 3, 4, of half the diameter; 3 and 4 being supposed to stand behind 1 and 2. It also shews, in addition to these four, that four others—viz. 5, 6, 7, and 8, may be constructed on the same foundation: thus 5 and 6 are contained in the centre vacuity at C, and 7 and 8 are contained in the four interstices or vacuities of the sides between the pyramids, which give four compound cunei, marked D, D, D, D (Fig. 1.); each of which being a cube equal to half the lesser pyramid, the four interstices, consequently, are equal to two such pyramids, making a total of eight, of half

the diameter, standing on the same base. Fig. 2 also shews the geometrical proportion of the pyramid, and the dotted lines extending to E E describe the spread or length of the base diagonally (see the corresponding E E in the plan). This proves that the structure should be at least one diameter in height, to maintain its just symmetry and proportion. No geometrical figure, in fact, varies so much in its perspective as the pyramid, or requires a nicer discrimination to determine its proper and actual dimensions.

Fig. 3, which describes one of the compound cunei in projection, shews that each of these contains a cube, which is equivalent to half a pyramid. The base of this compound wedge is found by dividing it in the middle at (c); it is thus reduced to two simple wedges, the cube of which may be ascertained in the usual manner: hence one interstice, or double wedge, being found to be equal to half a pyramid, the four interstices are proved to be equal to two pyramids, as previously explained.

It has been suggested by economists that two or four pyramids of half the

diameter of the plan given in the prospectus, would provide interment for the same number of individuals as therein specified, and be a very considerable saving of expenditure to the public—and would therefore be preferable to the great pyramid. The fallacy of such a suggestion is very evidently shewn by the above explanation, and is still more visibly demonstrated by a solid model of these figures. Nothing can be more erroneous than this suggested modification of the original plan. Four pyramids of the lesser dimensions will not provide catacombs for half the number of bodies; and instead of advantage accruing in any respect, a very material loss must ultimately be sustained, as well as a much larger outlay, in the first instance, be rendered necessary.

It is surely not difficult to perceive, how four pyramids of half the diameter of the original should be altogether inadequate to the purpose of providing interment suited to the wants of this mighty metropolis; nay, that they would absolutely cost more at the first outlay than the great structure originally projected: for instance, each lesser pyramid will require a separate foundation, and a separate drainage, consequently four would require double the length of sewer, and double every other appendage; while the same quantum of foundation requisite for the four, will also be sufficient for the entire construction of the larger plan, which, be it remembered, will contain more than double the number of bodies, and is to be a work of progression, as circumstances may require.

It may be added that four structures will require four lengths of centre shaft, four times the length of boundary wall, and four obelisks for terminating their elevation; while the large one being but twice their height, will only require half their length of shaft, and only one obelisk to form its apex, thus saving half the shaft, and three terminating obelisks.

Four smaller structures, moreover, will require, upon the same principle, double the quantity of inclined plane to facilitate interments from stage to stage, and twice the length of avenues and passages; the waste of which is obvious, as they occur at every stage.

Again, four smaller pyramids will require sixteen sides of superficial

stone facing, and the large one will evidently take no more than exactly the same quantity:—where then is the saving with regard to the superficial stone work?

Besides, four detached cemeteries of this kind will each require an enclosure of one hundred acres at least, to make up for its deficiency of accommodation—for the multiplying principle of the smaller pyramid will not generate above 100 acres: thus the quantity of land required for the four cemeteries, in the first instance, will be four hundred acres, and that to be surrounded by four boundary walls.

One great pyramid need not occupy an enclosure of more than fifty acres, (or 100, or say 200 acres at the very most,) and can it be asked whether 50 or 400 acres may be the more readily obtained? The base simply would occupy about eighteen acres, which being multiplied by several successive stages, one above another, will actually create, or generate, nearly one thousand acres out of the void space over our heads, as the work progresses upwards. This proves pretty clearly the importance and advantage of its uninterrupted form for the purposes of a general cemetery.

In conclusion, four cemeteries would doubtless require four distinct establishments, such as four chapels, four halls of register; whereas the Pyramid will require but *one* of each of these; thus saving *three times over* all such heavy extra expenditure.

T. W.

11, New Cavendish-Street.

COLLEGE OF SURGEONS.

To the Editor of the London Medical Gazette.

SIR,

IN ONE of your articles on the late proceedings at the College of Surgeons, there is a remark, in the propriety of which I entirely concur—viz. that the Council ought to make themselves well acquainted with the sentiments of the members. From this admission, and your professions of impartiality, I am encouraged to submit to you the following observations. They present the opinions of one who entertains greater respect for the Council than dislike of

Mr. Wakley, and more regard for the interests of the College than for those of either of these parties.

Of the ultimate object of the editor of the *Lancet*, in bringing the subject of the exclusion of the Naval Surgeons from his Majesty's levees under the notice of the members assembled in the theatre, I am ignorant: it might be that he had some other than the professed one in view; a supposition not improbable, considering the character and previous conduct of the individual. The *professed* object, however, being not merely a legitimate but a laudable one, it would have been most ungracious towards their brethren of the navy had the members present offered opposition to measures ostensibly good, merely because they were brought forward by a person of whose motives they might be suspicious: the resolutions accordingly met with the approbation—at least the tacit sanction, of those present. It is possible that the members have no right to discuss, or openly converse upon any subject in the theatre; but, considering the manner in which the resolutions were received by the meeting, the respectful language in which they were communicated to the President—for at the commencement of the affair the language was respectful—and, above all, the commendable nature of their object, the President and Council evinced but little tact on the occasion. Had Mr. Keate done at once that which he did finally—taken the resolutions, and said that he would lay them before the Council—not a question would have been asked as to whether he was to do so officially or not; the “*ad captandum*” speech and evasive proposal of Sir Astley Cooper would have been spared, as well as the offensive commentary of Mr. Thomas thereon.

It has long been believed that the Council of the College of Surgeons regard with jealousy, if not positive dislike, any request coming from the members, considering it to be an encroachment on their privileges. In accordance with this feeling, when the resolutions which were transmitted to them through Mr. Keate came to be considered, they determined that they could not act upon them, on account of their irregularity; they issued a circular prohibiting all discussion upon this and every other subject in the theatre, without allowing

a syllable to escape either expressive of their sympathy with the feelings of the members (and, in this case, it cannot be doubted of the whole profession), or of their intentions in any way to further their wishes. Would it not have been conciliatory—nay, even politic, on the part of the Council, to have waved, for this once, the question of strict right, and, frankly to have informed the members that, although their communication had been irregular, they would, in consideration of the motive, endeavour to promote its success; and at the same time have added, if they judged proper, that they could not allow such proceedings to be repeated? Had this open and manly course been adopted—had the favourable issue of Mr. Keate's applications in the highest quarters been made known, the disgraceful occurrences of the second day would have been prevented, and the *President* would have obtained that credit which is due wholly to the kind and zealous exertions of *Mr. Keate*; whereas, the result was communicated to one individual only, from whom it might as well have been withheld, since the sole use which he appears to have made of such knowledge was any thing but honourable.

That the members of the College, as a body, disapprove of the conduct of Mr. Wakley and his colleagues on the second occasion, there cannot be a doubt; for the manner in which this interfered with the business of the day was most indecorous, and inasmuch as the parties urged proceedings which they knew to be no longer called for (the knowledge possessed by Mr. King having unquestionably been shared with Mr. Wakley) was positively dishonest. Indeed, it now must be manifest, that their object was to bring discredit on the Council, and to have an opportunity of endeavouring to arrogate to themselves the merit which belonged exclusively to others.

With reference to the expulsion of Mr. Wakley *vi et armis*, perhaps the Council were ill advised, not as a matter of law, but of expediency; for, however indifferent the members at large may feel to the treatment experienced by that individual, they have not failed to perceive that the Council consider the commonalty to have no right or interest in the property of the

College, and that they are only permitted to enter the theatre by courtesy. Now even if this be the law of the case, it is most impolitic in the Council to bring it home to the minds of the members; for, if they do not possess any interest in the College, the knowledge of this fact, on the one hand, is not likely to attach them to the party who have afforded the unwelcome information; while, on the other, it will induce them to be less strict in scrutinizing the motives and conduct of those who seek to establish this right for them. The Council may rest assured, that, however much members may disapprove of the language which has been occasionally used in the differences between them and the commonalty, and have refrained from participating therein, yet all impartial and dispassionate men, who are able to trace effects to their causes, know that the various reforms in the management and regulations of the College have been the result of public discussions:—nay, this holds good on the present occasion; for they feel that the alteration of the regulations affecting Naval Surgeons is a consequence of the subject having been agitated in the theatre of the College. Is it not then to be regretted, that a ready opportunity is not occasionally afforded to the members of expressing their opinions collectively to the Council? Why should the Council remain insensible to the advantages which would arise from a freer intercourse, in their official capacity, between them and the Commonalty, which, without trenching upon their privileges, would increase the importance, the utility, and the character of the College?

In another communication I may possibly direct the attention of the Council to the advantages likely to accrue from this view of the subject. Meantime, I have the honour to be

Your obedient servant,

“ONE OF THE MULTITUDE.”

[We have not hesitated to give insertion to the preceding letter, because, though there are some points on which we think the reasoning fallacious, yet there are many judicious observations; and the whole argument is urged in a temperate and gentlemanlike manner.

When we have heard what farther our correspondent has to adduce in his next communication, we may possibly offer some additional remarks on the subject. —ED. GAZ.]

STATE OF THE MEDICO-CHIRURGICAL SOCIETY.

*To William Lawrence, Esq. &c. &c.
President of the Medical and Chirurgical Society.*

SIR,

No member of the Medical and Chirurgical Society who has been at all attentive to the proceedings of that institution for some time past, can have failed to remark the growing indifference of its numerous and most respectable members to its general prosperity.

Appointed, as you have just been, to preside over the Society, I cannot doubt that your well-known zeal for science will prompt you to make an effort to stay the progress of a distinguished scientific association towards that state of obscurity and complete insignificance to which it is but too unquestionably tending. The influence of your own name and reputation, and the effect of your personal efforts and eloquence, will, I doubt not, in some degree, retard this progress during the period of your presidency. But the two meetings which have been held since you entered upon your office, are not to be taken as examples of the usual attendance of the members, or the usual character of the proceedings; and I feel so thoroughly persuaded that other and more permanent means,—means of *resuscitation*, I might almost say,—are required, that I shall make no apology for addressing a few observations to you on the subject.

Let me first solicit attention to the actual condition of the Society. Its members consist of almost all the most distinguished men in the profession. Its presidents are always men of great eminence. Its funds are excellent. Its library is one of the most extensive and one of the best in the medical world. Yet, during the last three or four winters, if not for a longer period, the meetings of the Society have, for the

most part, been so miserably attended, that the members have really felt a kind of shame on introducing a visitor. Strangers from the country, and from abroad, have experienced the deepest disappointment when, on visiting a society known over all Europe and America, they have found eight or ten gentlemen assembled for a little more than an hour, and sometimes departing without a word being offered in the way of observation. Interesting papers have been read to a select and melancholy audience, — attracting a drowsy attention, and eliciting so few remarks that members seem to have become actually afraid to break the dreadful silence; and the sound of the clock, marking the advance of time towards the hour of liberation, has become painfully distinct.

Even at the annual meetings, out of 150 subscribing members, six or eight are with great difficulty collected; and more than half of these are officers of the society. At the late meeting, on the 1st of March, there was, during part of the time, no President, and during the rest of the time no Secretary. Nor did the dinner prove more attractive. A small party, not exceeding twelve or thirteen, only three of whom had attended the morning meeting, met together, and, equally unable to indulge in mutual congratulations on the appearance of things, and unwilling to utter common condolences, had the air of men assembled in some funeral hall, on the solemn occasion of the interment of a society which had departed full of years and of honour. Indeed the company at this anniversary festival was absolutely too small to permit the giving of toasts, or the making of speeches, or any of the usual and very allowable methods of promoting a good object.

The extensive and valuable collection of books in the Library of the Society, is, perhaps, less referred to than any collection in London; the books are fast accumulating in venerable and oblivious dust; and the unwonted steps of any morning visitor to Lincoln's-Inn-Fields awaken the echoes of an ominous solitude. Folios, and quartos, and octavos, repose there in indiscriminate and everlasting slumber; and the obliging and intelligent clerk in attendance at the rooms may be said to —

“ Seem like one who treads alone
Some banquet hall deserted;
Whose lights are fled, whose gauds are dead,
And all but he departed.”

It would be folly to deny that all these things are symptoms of decay; and I shall, perhaps, be pardoned if I further express myself in medical language, and say that it is the duty of the members, in this state of the case, to look for a remedy, or a preventive.

Upon the consideration of this I shall beg leave to enter in my next communication to you, and I remain, in the meantime, with much respect,

Your very obedient servant,

X. Z.

March 21, 1831.

ANALYSES & NOTICES OF BOOKS.

“ L'Auteur se tue à allonger ce que le lecteur se tue à abréger.” — D'ALEMBERT.

The Effects of the principal Arts, Trades, and Professions, and of the Civic States and Habits of Living, on Health and Longevity: with a particular reference to the Trades and Manufactures of Leeds: and Suggestions for the Removal of many of the Agents which produce Disease, and shorten the Duration of Life. By C. TURNER THACKRAH. 1831. 8vo. pp. 126.

THIS is really a curious, and, we conceive, a very useful, little work. If Mr Thackrah had done nothing more than collect the opinions and statements of other writers, touching the subject of which he treats, he should be deserving of high commendation for the edifying manner in which he has done it; but he has done much more, and a thing of more value—he has spared no exertion in the way of personal inquiry and research, in order to render his illustrations as complete as possible. We have run through his pages with much pleasure, and have been reminded of many curious particulars which we had already gleaned (though not for immediate use) in the course of our discursive studies. Few medical men, we imagine, will read the book without

some interest; but the general practitioner, especially he who "kills and cures" in manufacturing districts, will find it well worth having by him: and if the *operatives*, for whose special welfare the work is principally designed, could be induced to peruse it, they would be doing themselves essential service, and probably might abstract not a few nails from their coffins. But there is another class whose interests are not overlooked in Mr. Thackrah's Treatise, and who might probably be not a little benefitted by the perusal of it: we mean *students*. The picture which the author gives us of an individual of this numerous confraternity is interesting; but for the descriptive details, as well as for the excellent remedies which he recommends to the literary and sedentary man, we must refer the reader to the work itself.

MEDICAL GAZETTE.

Saturday, March 26, 1831.

"*Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso.*"—CICERO.

NAVAL SURGEONS.

IT is now several weeks since we stated, on information which we had received from an authentic source, that the naval surgeons were to be freed from the order by which they had been excluded from Court. Representations of the strongest nature against the obnoxious regulation were made by Dr. Burnett immediately after it had been issued, and subsequently by Mr. Keate, who waited on Sir James Graham, and had an audience of the King. The result of these steps was an intimation, that the naval surgeons should either be made commissioned officers, and thus removed from the influence of the regulation; or that the order itself should be rescinded. Information to this effect was communicated by Mr. Keate to Mr. King, who, we must say, has displayed considera-

ble cunning in his manner of turning it to account. Having allowed a sufficient period to elapse for the intended alteration to be made, Mr. King and Mr. G. Walker waited on the Lord Chamberlain, to whom they represented themselves as a deputation from the College of Surgeons. His Grace knowing that the President had been with his Majesty upon the subject, seems never to have suspected any trick, but, supposing them entitled to the character they assumed, communicated to them the fact that the Naval Surgeons were to be received at Court, the order having been annulled in consequence of the applications previously made. This boon, our worthy contemporary, with his usual modest assurance, has announced as the "result" of the deputation to the Duke of Devonshire; although his Grace informed the so-called deputation that what they came to seek had already been granted. Some explanation, however, appears to us to be imperatively necessary on the part of the Lord Chamberlain; as it ought to be put beyond the possibility of doubt, that he was ignorant of the parties to whom he granted an audience, and to whom he communicated the gracious intentions of his master—being, in fact, a deputation from a set of rioters, the ringleader of whom, in the course of the proceedings, had made an insolent and offensive attack upon the Sovereign.

LONDON UNIVERSITY.

SCENES of a very novel and curious description have lately taken place at this Institution. There had for some time been evidence of a gathering storm—squalls were alternated with the stillness of expectation, till it became apparent that the atmosphere of the anatomical class-room was charged with elements that could not be permanently tran-

quillized without an explosion. This took place on Wednesday, the 16th inst. On Mr. Pattison making his appearance, he was received by those present with sounds of the most opposite description. His friends were ranged below, his foes above, and a regular contest for the mastery ensued. The former applauded, the latter hissed; and for a moment the cheering seemed to preponderate, till the opponents of the Professor, abandoning their inarticulate mode of denunciation, began to utter cries of "*Off, off! — no lecture,*" &c.; when their superiority over his supporters soon became manifest, both as to numbers and zeal. A more extraordinary performance than that which followed was probably never before witnessed within the walls of any establishment devoted to science. The Professor bowed, and was about to commence his lecture, but "*off, off,*" resounded from all sides, and his voice was drowned in the din. The "*subject*" for demonstration was then brought in, but the dead and the living were treated with equal disrespect, and it seemed as if nothing could have increased the uproar, till at length a side-door opened, and Mr. Horner, the warden, entered. His office having for its especial object the maintenance of order, he proceeded, in the discharge of his duty, to address the students. It was now confusion worse confounded; the noise and clamour, and determined purpose of overwhelming his voice, became deafening. He attempted by every means to gain a hearing, but the attempt was in vain; the opposition to him appeared, if possible, more violent than that directed against Mr. Pattison. The drama was not yet ended, for behold the door opened once again, when three members of the Council, headed by Lord King, presented themselves. His Lordship, with looks and gestures as indicative of humble entreaty as those practised by John Kemble

during the O. P. rows at Covent-Garden, now came forward, and, laying his hand upon his heart, in dumb shew supplicated a hearing. For some time it was doubtful whether he would succeed any better than the warden, but at length having obtained a moment's pause, his Lordship put it to the students, as men of honour and feeling, to suffer the lecturer to proceed; assuring them that any representation they might send to the Council would be immediately attended to. Here his assertion was met by a declaration from one of the pupils, who instantly rose and stated that the class had already sent in a remonstrance which had not met with attention. Lord K. asseverated that this should not occur again; but the thread of his discourse, once broken, was not so easily resumed. Clamour again prevailed, and his lordship, with the whole of his party, were ultimately obliged to retire, leaving the pupils triumphant, and affording an excellent illustration of collegiate discipline. To make the matter complete, the lectures were suspended, and we understand that a *verbatim* copy of the former paper was sent in to the Council by the pupils, who have thus taken Lord King at his word.

On Monday last the theatre was opened again, when it was stated, by one of the pupils, that the "*Committee*" had agreed that there should be no further expression of disapprobation manifested towards Mr. Pattison at present,—an announcement obviously comprehending an acknowledgment that the previous disturbance and interruption of the lectures had been the result of an organized plan. The Professor soon after entered, and in a subdued tone, and with the appearance of a man oppressed by deep emotion, said, that after the interruptions which the course had met with, it became impossible for him to resume the thread of his discourse at the point at which it had been

broken; he should, therefore, direct their attention to a new subject. He then proceeded to demonstrate the surgical anatomy of the arteries of the lower extremity, and we must say, went through his task without betraying any of that confusion, carelessness, or inaccuracy, of which he has been accused.

The Duke of Somerset and Mr. Hallam were present, and paid great attention to the lecture. Were they sent there to judge of Mr. Pattison's qualifications as a teacher?

COLLEGIUM WAKLEYANUM MEDICO-CHIRURGICO-APOTHECARIUM.

WE have seen the proof of a prospectus of this great professional establishment, and are thus enabled to communicate to our readers some information regarding it—information which, we trust, they will receive with the respect and gratitude which the measureless importance of the subject demands.

The Collegium Wakleyanum is to consist of a President, Council, and Fellows, or *Confrères*, by which last body the office-bearers are to be elected. Those who are at present members of the College of Surgeons are to be admitted to the new institution on the production of their diplomas; but no diploma dated posterior to the 8th of March—the day of the “outrage” in the theatre, is to be received. The charter (when it is procured) is to convey numerous important privileges to the Fellows; and *inter alia*, that of electing from among themselves all the officers of the “chartered hospitals”—that is to say, of St. Bartholomew's, St. Thomas's, &c. &c. All the Fellows are to bear the common title of doctor, to whatever branch of the profession they may belong, and whether they have or have not a degree from any University. There are sundry other highly important and judicious improvements in the

present system, and we have no doubt whatever that the College will at once take, among the institutions of the country, the rank to which its merits so conspicuously entitle it. Need we say more than that this great national undertaking is already graced by a committee, whose names are familiar to the public, alike for their importance in society, and their attainments in science. *Doctor Wakley*, the distinguished founder, heads the list; after which come *Doctor King*, *Doctor Waller*, *Dr. Epps*, and *Dr. O'Shaughnessy*, who are empowered to increase their number to twelve, if necessary; and though we can scarcely suppose any additional influence or authority than must attach to personages so eminent can be required, yet it is gratifying to know that the future Council have the names of *Doctor Bowen*, *Doctor Marsden*, *Doctor Burt*, *Doctor George Walker*, *Doctor Bainbridge*, *Doctor Lovekin*, and several others equally distinguished, from among whom to choose their colleagues. Well may the medical corporations tremble for their charters—well may the Royal Colleges of Physicians and Surgeons hide their diminished heads before the paramount dignity of the COLLEGIUM WAKLEYANUM MEDICO-CHIRURGICO-APOTHECARIUM!!!

TRIAL AT MAIDSTONE.

A TRIAL of much importance to medical men, as shewing the state of the law with regard to members of the College of Surgeons and Licentiates of the Society of Apothecaries, lately took place at Maidstone. We have procured full notes, taken by a short-hand writer employed for the purpose, and shall give the most interesting points in our next No. especially Judge Bayley's charge, which is in direct opposition to the doctrines by which a certain worthy contemporary of ours has for years been endeavouring to mislead the medical public.

REPORTS OF CASES OCCURRING
AT PUBLIC INSTITUTIONS.

LA PITIE.

[CASES TREATED BY M. LISFRANC.]

Spasm of the Wrist, with Swelling of the Hand and Forearm—Inefficacy of Antiphlogistics—Cure by Compression.

A CURRIER, aged 51, and of good constitution, fell on his right hand on the 21st of December. The wrist was extremely painful, and, the evil increasing, he was compelled on the 24th to apply for assistance at La Pitié. On his admission there was considerable swelling of the hand and forearm, impossibility of making the slightest movement with the wrist; pain, heat, but not redness. The sprain had influenced the articulations of the bones of the carpus among each other, and with the radius. He was bled from the arm; forty leeches were applied to the swollen parts, followed by emollient cataplasms. He had low diet.

Next day no improvement. He was bled again; the cataplasms were continued, and after some days the leeches were applied again. The heat and pain diminished in general, but the swelling remained.

At the beginning of January M. Lisfranc resolved on employing compression. It was first made by means of a roller: afterwards graduated compresses were added; and, lastly, two splints, encircled by a simple bandage.

Under this method the complaint rapidly improved: but compression is a discutient and *excitant*; it sometimes exceeds the degree which is intended, and this happened in the present instance. The splints caused an erythematous redness at some points of the hand and forearm, and were suspended during some days; after which they were re-applied, and the patient was speedily cured.

Herpes cured in twenty-four hours by the application of Nitrate of Silver.

An old man, about 80, of vigorous constitution but impaired mind, was admitted January 4th. He had sharp pain about the abdomen, and general indisposition, but gave an extremely

indistinct account of himself; saying, among other things, that he had received a fall. On examining him, no appearance of bruise was perceptible, but an eruption of bullæ was seen occupying the whole of the left side, M. Lisfranc immediately applied the nitrate of silver to these.

Next day all the cauterised points were covered with greyish eschars, and the day following all uneasiness had entirely disappeared. The eschars dropped off about the eighth day.

SIR PATRICK DUN'S HOSPITAL.

Removal of Tympanitis obtained by passing a Gum Elastic Tube through the Rectum as far as the Arch of the Colon, and pumping out the Intestinal Gas by means of a Stomach-Pump.

THE case of Anne Fret, aged 22, admitted 23d January, 1831, to Dr. Osborne's ward, is principally valuable on account of its having afforded an opportunity of proving the practicability of relieving distension in a way not hitherto adopted. She had various hysterical symptoms, with obstinate constipation of the bowels, which, although relieved, yet were followed by tympanitic distension, which produced the greatest distress, and for which the employment of leeches, carminatives, and various other remedies, proved wholly unavailing. It became an object of importance to examine the abdominal viscera, in consequence of some symptoms of doubtful import which at different times had occurred. Dr. Osborne having introduced a gum elastic tube, of nearly three feet in length, with a button and hole at its extremity, and applied to it an air-tight stomach-pump, proceeded to pump out the gas, and was enabled to do so with but few interruptions, which were speedily overcome, either by shifting the place of the tube in the intestine, or by injecting warm water to clear the holes from accidental stoppages. The gas thus extricated was nearly inodorous, and extinguished flame, being most probably entirely carbonic acid. In about an hour the abdomen was reduced to nearly the natural size, with complete relief of the painful distension, and thus an opportunity was afforded of ascertaining that no visceral enlargement had taken place. In passing the tube through the rectum and sigmoid flexure, it was occasionally retarded by folds of the mucous membrane; but was soon freed by injecting warm water, and thus procuring distention at those parts. Very little inconvenience was experienced by the patient, although she felt the end of the tube in the left hypochondrium. The

same process was repeated upon her more than once, and with the same effect.

Portions of the intestines dilated by flatus beyond their power of contraction, resemble the bladder when reduced to a paralytic state in consequence of retention of urine, and cannot contract effectually until a diminution of their contents is first obtained; hence it is probable that this method may not only prove a temporary relief, but may contribute to the permanent removal of many cases of torpidity of the bowels.

Hemiplegia—Spasmodic Contraction of the Muscles of the Arms—Speech and Deglutition impaired—Serum in the Ventricles, and Arachnitis without Ramollissement.

Ellen Magee, æt. 36, widow of a sailor, admitted 5th of January, 1831, to Dr. Osborne's wards, with inability of motion at the right side, excepting a slight degree of power which she retains over her right leg. No diminution of sensation. Mouth drawn towards the left. Speech much impaired, but appears to retain her intellects. Pupil of right eye contracted; deglutition difficult; hearing perfect. Feet cold; pulse 72; bowels confined during the last four days.

About two months since, she was seized with a fit (conceived to be apoplectic), after which she so far recovered as to be able to walk, until ten days ago, when a recurrence took place, which left her in her present state.

Under the use of the remedies prescribed on the 8th, deglutition and speech were considerably improved, and on the following days we find the following reports.

17th.—Pulse natural. Ptyalism.

19th.—Tendency to lie on the paralysed side; pains in the limbs of the other side.

30th.—Able to sit up.

February 16th.—Walks about the ward, but with difficulty. Can move the arm in a slight degree towards the body. Sensation unaffected. Pupil of right eye still contracted. Speech improving.

On the 24th, in the evening, she had a sudden seizure; she fell down, unable to express herself, and continued screaming during the night. The temporal artery was opened, and pills of croton oil administered.

On the 25th nearly insensible. When desired, she makes an effort to put out her tongue. Deglutition extremely difficult; pulse 100; left arm now paralysed; the muscles of the humerus in a state of permanent contraction; muscles of the right arm as before; right pupil contracted, left natural; has the use of her left leg; paralysis of left eye-lid.

28th.—Deglutition easier; attempts to answer when spoken to; muscles of both arms spasmodically contracted.

27th.—Continual screaming during the night, resembling the howl of a dog who has lost his master. Is now asleep.

28th.—Pulse 96; right pupil contracted as before, less sensible to the stimulus of light than the left: muscles of arms continually contracted.

29th.—Died this morning.

Necropsia about six hours after death.—The veins of the brain distended with blood. Arachnoid at the upper surface of both hemispheres, especially at the left, opaque, with copious effusion of serum both above and between it and the pia mater. Ventricles distended with serum, amounting to above two ounces, nearly transparent. Substance of the brain of a natural firmness in every part, a careful search for lesions in its structure having been made in vain. The cortical substance of a more decided colour than usual. Lungs and heart healthy.

Emphysema of the Lungs—Dilatation of Bronchial Tubes—Tubercles—Pulmonary Apoplexy—and Sudden Death.

Jane Coleman, married, æt. 28, admitted to Dr. Osborne's ward 10th October, 1830, with pertinacious cough; frothy semi-transparent expectoration; general soreness of the chest; sub emaciation. Pulse 120; painful decubitus on left side; perspirations; sonorous râle throughout both lungs. Complaint reported to be of twelve months' duration, with occasional interruptions. Had hæmoptysis fourteen days ago.

Oct. 13th.—Dry crepitation at the base of right lung; greenish opaque expectoration.

26th.—Pulse 116; cough and expectoration diminished; tenderness at the pit of the stomach.

Nov. 6th.—Gargouillement above left mamma, with sonorous râle, and moist crepitation.

8th.—Slight streak of blood in the expectoration, with cavernous respiration above the left mamma.

15th.—Pulse 112; cough diminishing.

On the 22d she found herself so well, that she announced her intention of leaving the hospital on the following day; but during the night she was seized with a vomiting of blood, and almost immediately expired.

Necropsia seven hours after death.—Body a little emaciated. Lungs with some adhesions; substance of both universally emphysematous, except towards the roots and apices. At the latter there were clusters of tubercles in the different stages, and a few tubercular cavities, none of them larger than a hazel-nut. Several, but not large, patches of pulmonary apoplexy in the emphysematous portions. Bronchial tubes much dilated, and filled with coagulated venous blood; above a pint of the same in the stomach. Abdominal viscera healthy.

LONDON HOSPITAL.

Emphysema of the Lungs.

KITTY BARRETT, æt. 18, a servant, of a slender frame, was admitted into the London Hospital on the 23d of February, under the care of Dr. Billing.

She states that her illness commenced about a fortnight ago with shivering, cough, difficulty of breathing, tightness across the chest, and great loss of strength. She now complains of great weakness; of a cough, which is severe, and comes on in paroxysms, and without any expectoration; and of difficulty of breathing. Her manner appears hurried and anxious. The roushus crepitans is heard at the left side of the chest, and the respiratory murmur is not audible at any part. Pulse 132, and hard; lips and cheeks of a purple colour; skin hot and dry; tongue moist; thirst; one or two motions daily.

V. S. ad 3xvj.

Mist. Ant. Tart. ʒss. om. hora.

Feb. 24th.—Is not any better this morning; respiratory murmur still inaudible; pulse 120, and soft. Medicine produced vomiting, except the last dose, which was taken to-day at four, P.M.; bowels open. No attempt has been made to percute the chest, on account of her very weak state.

Perstet.

25th.—Continues much the same; countenance sunken; respiration hurried; no vomiting from the medicine.

26th.—Is much weaker and more depressed this morning; expectorates a little mucus. The medicine was suspended, and she has had some wine. Pulse very quick and small; tongue dry; much thirst; skin perspiring.

To have more wine.

Tinct. Opii, ℥xx. statim.

She died during the night.

Post-mortem Examination.

Body delicately formed; chest small.

Thorax.—On opening the chest, the lungs were observed to rise above the margins of the incised cartilages of the ribs; their surface was smooth, and on being pressed felt like down, and did not afford any crepitation. On examining them minutely, the cells were observed to be considerably distended, and presented an appearance similar to the lungs of reptiles; air had also distended the cellular substances between the lobules. The lungs, with the heart attached, dipped but little when put into a vessel filled with water. On opening the trachea, and following the course of the bronchial tubes of both lungs, the mucous surface was found much inflamed, particularly in the minute bronchial di-

visions; and the inferior part of the left lung was in a state of engorgement, indicating the first stage of peripneumonia. On the surface of the right lung was found a solitary tubercle, about the size of a small filbert, composed of a hard cartilaginous cyst, containing cheesy matter. The heart was healthy, but pale and flabby.

Abdomen.—The liver was paler than natural; the stomach and intestines were perfectly healthy. The other parts were not examined.

CASE I.—Chimney Sweeper's Cancer.—Scrotum successfully removed.

David Sutang, æt. 67, admitted on the 12th January, by trade a sweep from seven years of age, first perceived a small pimple in the centre of the scrotum twelve months back, which quickly shot into four parts, and very quickly spread, so that in six months its size was nearly as large as at present. It now covers the whole scrotum, giving it a cauliflower appearance; though it is very red, and discharges from its surface a little inoffensive healthy pus. The inguinal glands do not appear affected, nor has he any pain or uneasiness upon pressing the abdomen; neither can any disease of the lumbar glands be felt. His general health is good; pulse natural; tongue clean; bowels regular. He experienced a good deal of darting pain in the scrotum the night before last, which was quieted by opium. He has been twice into the warm-bath, but his skin is still very much grimed with soot.

Unguent. simplex.

20th.—To-day he consented to have the disease removed; an incision was therefore made beyond the morbid growth, and the whole scrotum and a great part of the integuments of the penis were by this means removed. The testicles were completely exposed, and were perfectly healthy. There was a good deal of bleeding, chiefly venous, which was stopped by cold applications.

Trac. Opii, gtt. xl. statim.

22d.—Wound healthy; no fever; is low; tongue dry, rather brown; pulse feeble.

Bread poultice. Porter, Oij. Wine, Oss.

26th.—Healthy granulations from testis; tongue clean and moist; pulse low; erysipelas of the face.

Liq. Calcis c. Spiritu. Rep. cervisiun.

March 1st.—A new scrotum quickly formed, erysipelas soon went off, and he now goes out of the hospital quite well.

CASE II.—Fatal Hæmatemesis.—Post-mortem Examination.

Thomas Wallis, about 30 years of age,

was admitted into the hospital, under the care of Sir W. Blizard, on Monday afternoon, February 22d, in a state of great depression, having vomited a large quantity of blood. He was said to have met with an accident in the morning, by falling down a ship's hold. Soon after he was admitted he threw up from his stomach above a pint of blood. He was ordered to take

Plumb. Acet. gr. i. c. Opii, gr. ss. quartis horis.

Tuesday.—He was a little revived, and was allowed to take very small quantities of cold drinks. A clyster was given him, and the acetate of lead with opium was directed to be discontinued.

Wednesday.—In the morning he had a very dark-coloured, offensive stool; he complained of pain in the region of the stomach, and having vomited above a pint of blood he fainted, from which state recovery took place slowly; but he soon sunk, and died about four o'clock in the afternoon.

On examination of the body the viscera of the abdomen appeared generally blanched, the stomach and intestines were distended with flatus, and dark grumous blood resembling coffee-grounds. The vessels of the mucous lining of the stomach were gorged with blood, and its surface had a pulpy feel, but no rupture of vessels could be distinguished. The liver was hardened and diseased, presenting the usual appearances of the drunkard's or hobnail liver.

On the Coroner's inquest it appeared that the man had not met with an accident, but that a falsehood had been told for the purpose of procuring his immediate admission into the hospital. He had been drinking largely of spirits from the previous Wednesday till Saturday, when he first vomited blood.

CASE III.—*Rupture of the Kidney.—Post-mortem Examination.*

A labouring man, about 50 years of age, whilst engaged at his work, was knocked down by part of a brick wall falling upon him. He was brought to the hospital, and on examination appeared to have received a slight contusion on the loins. The man was kept in bed, purged, and apparently was going on very well, only complaining of weakness in the back, when, on the tenth day after the accident, about half-past six in the morning, he suddenly complained of severe pain in his loins. His abdomen soon after became distended, great depression of the system took place, and he rapidly sunk, and died at three o'clock in the afternoon.

Examination of the Body.—Upon opening the abdomen a large tumor was observed behind the peritoneum, which had forced the viscera before it. When cut into, it appeared to consist of an enormous mass of coagulated

blood, in the centre of which was found the right kidney, ruptured transversely in two. The renal vessels were examined, but no trace of disease could be found, with the exception of a slight appearance of increased vascularity in a part of the lining membrane of the renal vein. The left kidney was soft, as also the two portions of the right, but they were not otherwise unhealthy.

CASE IV.—*Traumatic Tetanus treated by large doses of Opium—Fatal Result—Postmortem appearances.*

January 23d.—Robert Gutter, æt. 21, blue eyes, fair complexion, admitted the 6th inst. having had the integuments of the leg very much lacerated from a cart-wheel, but these had been brought together with *eight sutures* by a surgeon prior to his admission. The wound from the first has looked very well, and has in some measure healed; but yesterday he complained of some difficulty in opening the mouth, which has to-day increased, so that he can scarcely open it sufficiently to protrude the tip of the tongue; and there is slight tenseness of the abdominal muscles. Pulse rapid, 108; tongue rather brown, and dry; slight inclination of the body to the left side.

Ol. Ricini, ℥j. statim. Vini Rubri, ℥iss. omni horâ, c. Træ. Opii, gtt. xx.

24th.—Has dozed a little, but has not slept soundly; muscles much in the same state; thinks the wine too strong. Upon taking some now he had difficulty in swallowing it, and some was rejected, together with some greenish yellow bile. Pulse 136, more feeble; eyes more suffused; two motions.

Aug. Tr. Opii ad gtt. xxx. om. horâ.

25th.—Restless and uneasy. Abdominal muscles very tense; pulse very feeble, 118; protrudes the tongue to the same extent; some sleep. Has just had an enema with Tr. Opii, gtt. 100.

27th.—Abdominal muscles very tense and rigid; jaw in the same state; wound very healthy; strong contraction of the extensor muscles of the great toe of the left foot; muscles of this leg more rigid than those of the other. Three or four very fetid motions from castor-oil; tongue moist; pulse fuller, wiry, 116; a pain at scrobiculus cordis the last week; rather less the last two days; urine free; very copious perspiration.

Perstet.

29th.—Much worse. Frequent spasmodic action in the muscles of the neck; abdominal muscles very rigid; breathing short and hurried, carried on chiefly by the diaphragm; pulse small, feeble, wiry—so quick that it cannot be counted. Tongue can scarcely be protruded; some difficulty in swallowing—

fluids even often return. Pain at scrobiculus cordis continues. Bowels several times opened by oil.

30th.—Died in a paroxysm of spasm, at 4 p.m. yesterday.

Dissection.—*Muscles*: not particularly rigid.

Head.—Dura mater strongly adherent to the cranium. Tunica arachnoidea opaque. Some fluid in base of skull. Brain itself perfectly healthy.

Spine.—A small quantity of fluid flowed out upon opening the theca vetebralis, in all not half an ounce. The medulla spinalis quite healthy.

Nerves.—The sympathetic nerve very white and natural, except the first cervical ganglion, which was preternaturally vascular. The sacral nerves were also more vascular than usual at their origin, but the sacro-sciatic, and crural nerves healthy.

Throat.—Papillæ of the tongue large, particularly towards the root. The epiglottis membrane of the mouth, and cordæ vocales, and membrane of trachea and bronchi, more vascular than usual.

Lungs distended with air, every where crepitating under pressure, and of a bright scarlet colour.

Heart healthy; no fluid in pericardium.

Abdomen.—Nothing remarkable in the mucous membrane of stomach, or the intestines. Liver healthy; some green bile in the gall-bladder.

EDINBURGH INFIRMARY.

Inflammation of the Lungs—Bleeding and large doses of Tartar Emetic? suppression of Abdominal Inflammation? Bleeding and large doses of Opium—Slow Recovery.

JAN. 6th.—John Lettie, æt. 29, cabinet maker. He labours under considerable dyspnea, respirations being confined to 36 in the minute, performed by the diaphragm solely. The attempt to take a full inspiration excites cough, which is attended with much pain, referred chiefly to lower third of right side of chest, but not confined to that situation. Sputa transparent; viscid mucus partly rust-coloured, with several large permanent bullæ; the cough occasions severe headache; there is much vertigo in the erect posture, with a good deal of general debility; face flushed; expression anxious; eyes suffused; mind quite coherent; skin warm, soft; tongue furred, and white in centre; brown and dry at tip, with much thirst; pulse 112, full. Anorexia; bowels open.

On percussion, the thorax anteriorly sounds well, except the upper and anterior third of right side of chest, which emits a dull sound. By the stethoscope, a loud sonorous râle is heard in the inferior two-thirds of right side anteriorly, and also in left side generally, but less loud in posterior part of left side; more of the cooing

character superiorly; lower down, the râle souscrepitant. In the portion of the right side anteriorly, which is dull on percussion, the râle souscrepitant is heard, and respiration appears bronchial.

On the 29th of December, while at work, was seized with pretty sharp pain of left side of chest, which continued, with cough, for two days, but did not oblige him to discontinue his usual occupation. On the 1st of January, these symptoms, together with the dyspnea, had so much increased as to render confinement to bed necessary; they have steadily advanced in severity. No curative treatment whatever has been had recourse to; is not aware of any particular cause for his illness; was not unusually exposed to cold, or hard work; is not particularly addicted to strong drink; illness not ushered in by any rigor.

Rt. V.S. Pectori admoveatur Emplastrum vesicatorium amplum. R. Antim. Tart. gr. iv.—Aqua fontanae, ℥viij. solve sumr. ℥j. omni behorio ad vomitum et postea sumr. ℥ss. pro dose. Hbt. h. s. Bolum Jalapæ, Comp.

7th.—Was bled to fourteen ounces, producing much nausea; much vomiting from two doses of solution; nausea not excited by diminished dose afterwards; four stools; blister rose well; cough less frequent, but still causes pain of chest; full inspiration can scarcely be performed; the attempt does not excite cough, but produces pain along right side of chest anteriorly. Râle scarcely felt to day when hand is applied to chest, except under left nipple, and there it is much less considerable: it is also much less distinct posteriorly; respiratory murmur more obscure in lower and posterior part of both sides; sound on percussion dull over the whole of right side posteriorly; respiration bronchial, with bronchophony; sputa as before; blood very buffy, and crassamentum is adhering to the sides of the vessel. He becomes faint on sitting up. Pulse 103, full, and tolerably firm.

Continuat. Solutio antimonialis ad nauseam sustinendam. Cras m. sumr. Infusi.

Cathart. ℥iv. et rept. ad Catharsin.

8th.—Pulse 1st night quick, large, and tense; solution given to eight ounces, causing continual sickness; no vomiting. Pulse 116, less full, firm; cough less frequent, and less pain of chest; respirations forty; chiefly abdominal sputa, as before; tongue furred, brown, parched; much thirst; two liquid stools; skin soft, of moderate heat.

Contr. Solutio Ant. Rept. Infus. Cathart.

9th.—Nausea constantly maintained; no vomiting; eight ounces of solution taken; seven stools; cathartic draught not given this morning; cough rather more severe since 4 a.m. still causing pain. Pulse full and firm, sickness having gone off; respirations thirty-six, less abdominal; sputa

frothy; speech interrupted by dyspnœa; tongue furred; skin of moderate heat, moist; generally in right side, anteriorly and laterally, the râle crepitant is heard, respiration being bronchial in the same side posteriorly, with râle crepitant: it is also heard lower down, mixed with the râle muqueux in the left side.

Hbt. Solutionis Antim. antea prescript. ad 3xvj.

10th.—Fourteen ounces of solution taken; constant nausea until lately: medicine by mistake has been suspended since 7 o'clock this morning; pulse 78, full, soft, firm; dyspnœa diminished; cough as before; no vomiting; respirations 36, more thoracic; percussion still very dull on right side; expectoration increased, frothy, with very slight partial brown tinge; two stools; tongue furred in centre, white, brown, and parched at tip.

Contr. Solutio Antimon.

11th.—Twenty-four ounces of solution taken, containing twelve grains of tartarized antimony, producing only slight and transient nausea after each dose; four stools; tongue moist, furred, dry, and florid at tip. Pulse 76, of moderate strength, full. Cough unabated; expectoration frothy, colourless, adhesive.

Utat Linctu Opiato. Contr. Solutio.

12th.—Twenty-four ounces of solution taken, first dose only causing slight nausea; pulse natural; respirations thirty-two, chiefly abdominal; tongue furred, moist, but dry at tip; thirst diminished; cough frequent, but causes less pain.

Contr. Medicam.

13th.—About 7 last evening was seized with severe pain of left iliac region, which quickly extended over abdomen; much tension, but relieved on firm pressure. Solution discontinued; an ounce of castor oil, with ʒj. of laudanum given, and a common enema an hour after, producing one scanty stool, which gave relief. Cough less frequent; abdomen tumid and firm, with increase of pain from partial pressure, but relief from extended steady pressure. Pulse 92, firm, and moderately full, somewhat hard; tongue parched, and brown in centre, white and moist at edges; much thirst; respirations forty-four.

Omitr. Solutio.

Applicant. *Hirud. xxiv. abdomini. Foveatur abdomen, Injiceatr. Enema, emolliens, lbiv. et repetat. Stia quaque hora persistente dolore.*

14th.—Leeches bled well, but without relief. Two enemata given, with very little feculent discharge; pulse last night 96, tolerably full and firm. Pain continuing severe, castor oil was ordered, but has not operated, and V.S. was ordered, but not performed, the

direction being misunderstood. Was bled this morning at 11 a.m. to 20 ounces, blood buffed and capped; evacuation caused nausea; and increased frequency, but no other effect on pulse; pulse at present 124, small, hard, tolerably firm; abdomen distended, flatulent, painful on pressure; respirations thirty-two, thoracic; face pale; expression anxious; tongue furred, brown, and parched in centre, white and moist at edges; great thirst; complains of want of sleep.

Statim Rept. V.S. prout ferant vires. Quamprimum Injiceatr. Enema, c. Ol. Ricini, 3ii. Applicatur Emplastrum, vesicatorium amplum abdomini.

15th.—Was bled to twenty ounces; crasamentum was cupped and very buffy; immediately after last visit had two grains of opium, and this was repeated four times at intervals of four hours; the two last doses were returned by vomiting; great relief after first pill, and in evening abdomen was softer and much less painful; pulse fuller and softer; late in the evening pulse was smaller, but this was the only change; blister rose well; at eight o'clock this morning had ten grains of calomel, and one of opium; vomited after half an hour; effervescing draughts have been given occasionally, each with ten drops of laudanum; abdomen still distended, but free from pain except on motion, as when vomiting; vomiting continues; tongue thickly coated, yellow; a very large stool faculent stool from injection, which was repeated at six in the morning, with a smaller stool of the same character; pulse at present 112, pretty full and firm, slightly hard; respirations thirty, chiefly thoracic, but with some motion of diaphragm; skin warm and moist; countenance nearly as yesterday.

Statim rep. V. S. et Opium ad gr. ij. iterumq. post h. iv. quam primum injiceatur Enema c. Ol. Ricini, 3ij.

16th.—Ten ounces of blood taken at two o'clock; at four, the pulse being rather hard, with occasional stinging pain of abdomen, otherwise generally easy, twelve ounces of blood were drawn; during the evening he continued easier, abdomen being softer and less pained; pulse about 120, softer and more compressible; had ten grains of opium at five doses since last visit, one dose only vomited; an injection, with ʒij. of castor oil given immediately after visit, and repeated this morning—the first producing a very scanty, the other a more copious, liquid faculent stool, of natural colour; has slept seven hours since 12 last night, immediately after some bilious vomiting, which had continued about twenty minutes; pulse immediately before visit 104, full and sharp, of moderate strength; was then bled to twenty-two ounces; each bleeding caused languor; after the last, pulse rose to 120, its tone being much more natural; blood in almost all

the cups very buffy; free from stinging pain of abdomen since last night; languor continues; pulse 120, small and firm; is very drowsy; tongue furred, yellow, dry.

Vespere rep. Enema c. Ol. Ricini, ʒij.

17th.—Three stools from enema, faeculent, and of natural colour—the first pretty copious, the others less so; slept soundly during the whole of the night, excepting half an hour; has had four grains of opium at two doses; no return of vomiting; tongue thickly coated, white and dry; pulse 96, full, firm, and rather hard; blister discharges largely; abdomen is still distended, though in a less degree, and is softer; no pain on pressure, except from tenderness of blistered surface; slight pain on full inspiration, also attributed to blistered surface; respirations about twenty-six, partly abdominal, but chiefly thoracic; skin of natural heat; countenance improved.

Sumat quam primum Opii, gr. ij.

18th.—At four yesterday afternoon symptoms had not changed; was then bled to twenty ounces, producing nausea; at six symptoms were as before the bleeding, and he was bled again to fifteen ounces, with similar effect; pulse rising to 120, but changing little in character during the operation; complained of sharp pain of abdomen, which has since ceased; two grains of opium were continued, and repeated at six, and thrice since; no return of vomiting; one pretty large, faeculent, and formed stool from castor oil; injection given at midnight; warm perspiration, especially on head and hands; blistered surface discharges; pulse 120, pretty full, but compressible, sharp. There is still considerable flatulence, and the distention of abdomen scarcely altered since yesterday; respiration sixteen, partly abdominal; slept a good deal, but not so well as the night before; tongue thickly coated, white, dry; blood, at first bleeding, much cupped and very buffy, coagulum very small—that from the second bleeding was obtained in a smaller stream, and the coagulum is large, adhering to the sides of the vessel; there is a very partial buffy coat only in one of the cups, in the others the blood is natural.

Contr. Opium ad gr. ij. 6ta q. q. h.

R Tinct. Digital. ʒij. Mist. Mucilaginis. ʒvj. M. sumr. ʒss 6tis h.

19th.—Some vomiting immediately after visit yesterday, apparently of curdled milk, tinged with bile; had been taking milk in large quantity; had a large, soft, faeculent stool last night from castor oil injection. Slept well; medicine taken regularly; some pain of abdomen since 10 this morning, occasionally aggravated, but never ceasing entirely. Pulse 108, sharp, but compressible; abdomen rather more tumid; pain not aggravated by full inspiration; respiration eighteen, chiefly thoracic, but partly abdo-

minal; expression of countenance good; skin of natural heat, moist; tongue cleaner at tip and edges; thirst diminished.

R Fol. Nicot. Tabaci, grs. xv. Aquæ Fontanæ, ʒvj. Infunde per horæ quadrant. et cola. Fiat enema q. p. r. injiciend. Cont. Opium, ad grs. ij. 4ta q. q. h. et Digitalis.

20th.—Injection retained about eight minutes; obtained a pretty large faeculent stool, without causing nausea or vertigo; pain of abdomen at same time subsiding, and has not since been felt except in a slight degree last evening, on motion. Injection repeated this morning, but immediately returned, producing a sufficiently copious faeculent stool, natural and partly formed. Pulse in the afternoon much more soft and compressible; at present 104, firmer, and slightly hard. Abdomen less tumid and free from pain on pressure; respirations 16, natural; tongue cleaner at tip and edges, but dry, and still thickly coated in centre; countenance pale; sweated profusely after first enema.

Cont. Pil. Opii, et rept. enema ex Nicot. Tabaci vespere. Some thin arrow-root occasionally.

21st.—Nausea and vertigo, with pretty copious liquid faeculent stool from injection yesterday. No return of nausea, except in slight degree, from medicine; slept pretty well, and sweated much; respirations natural; distention of abdomen diminished, but there is still some pain on partial pressure; tongue clean, but dry; thirst diminished; appetite improves; pulse 92, firm, a little harsh; face less pale.

Rept. Enema, ut heri.

22d.—One costive stool from injection last night; ʒvj. of castor oil given in evening without effect till he received a tobacco injection this morning, since which he has had one larger stool, of natural colour. Considerable sharp pain of abdomen early in the night, less since morning, but still felt on motion or pressure. Pulse 88, moderately full, compressible; tongue as yesterday; little thirst; respirations natural; some flatulent distention in upper part of abdomen; lower part more natural; wishes some food.

Sumr. stm. Ol. Ricini, ʒvj. et post h. iij. rept. Enema ex Nicot. Tabaci. To have an egg at dinner to-day.

23d.—Two sufficiently large hard stools, of natural colour, from two enemata; appetite improves; thirst diminished; tongue much cleaner, but dry; pulse 92, firm and harsh; has had several times since yesterday sharp shooting pains in abdomen, chiefly in lumbar region, and shooting towards epigastrium, each paroxysm lasting at most ten minutes; abdomen somewhat tense, but

little distended, and bears firm pressure. Egg not given.

Omit Opium. St. Rept. Enema. St. Ol. Ricini, ʒij. et Vespere appliet. Hirud. xviii. si perstitit dolor abdominis. An egg to-day, and daily.

24th.—Very little effect from injection; oil had not operated in the evening, and ʒss. more was given, which was followed by four stools, soft, feculent, and natural; pain continuing in the evening, leeches were applied, and bled well; pain rather more sharp in the night, but attributed to action of oil. Abdomen less distended and softer; slight pain on pressure. Blister healed; slept well, but has more general uneasiness to-day; pulse 86, moderately full, and firm, rather sharp; face pale; tongue cleaner, and moist. Egg taken with relish.

Omit Digitalis. St. vespere II. Diaphoret. et Injiceat. Enema, c. Ol. Ricini, ʒij.

25th.—Says he has been free from pain since yesterday morning; slept well; pulse 78, natural; tongue dry, rather more furred; refused the injection; has had no stool; swelling of abdomen considerably subsided.

Iibt. Enema, c. Ol. Ricini, ʒij. Continue the egg, and let him have beef or fish.

ERRATA IN MR. PARKER'S LECTURES

Contained in the present Volume.

Lec. II.—P. 101, line 11, for "*pia enters*," read "*pia mater enters*."

Lec. III.—P. 131, line 25, for "*scriptensis*," read "*scriptorius*." P. 132, line 26, for "*quadrumana of man*," read "*quadrumana and man*." P. 163, line 3, for "*articular*," read "*cuticular*."

Lec. IV.—P. 225, l. 9, for "*zemi*," read "*zinn*." P. 227 and 230, for "*renticular*," read "*lenticular*." P. 229, l. 41, for "*eighth*," read "*fifth*." P. 230 *passim*, for "*speculum*," read "*operculum*." P. 233, l. 46, for "*constraint*," read "*consent*."

Lec. V.—P. 299, l. 49, 2d col. for "*motorius*," read "*respiratorius*." P. 291, 3d line from the bottom, for "*sell*," read "*gill*;" l. 9, 2nd col. for "*bidian*," read "*vidian*;" for "*depreciate*," read "*deporate*."

Lec. VI.—P. 351, l. 54, for "*tinæ dermis*," read "*true dermis*;" l. 56, for "*paunicule charune*," read "*pannicule charnue*." P. 351, l. 42, 2d col. for "*capillary*," read "*papillary*." P. 357, l. 45, 2d col. for "*derma*," read "*derma*." P. 359, l. 8, 2d col. for "*and tract*," read "*struck*."

Lec. VII.—P. 453, l. 3 from bottom, for "*attributed*," read "*distributed*;" last line, for "*eighth pair*," read "*ninth pair*;" l. 12, 2d col. for "*eighth pair*," read "*ninth pair*." P. 451, l. 20, for "*lingual branch of the eighth*," read "*lingual branch of the fifth*;" l. 32, 2d col. for "*sixth*," read "*fifth*."

Lec. VIII.—P. 511, l. 43, for "*phemeral*," read "*phaneral*;" l. 31, 2d col. for "*sense and vision*," read "*the sense of vision*." P. 515, l. 6, for "*severen*," read "*syren*;" l. 55, for "*sense and smell*," read "*the sense of smell*." P. 518, l. 26, for "*fillæ*," read "*field*."

Lec. IX.—P. 578, l. 41, for "*cetaceous*," read "*cretaceous*;" l. 53 and 54, 2d col. for "*oscula*," read "*scala*."

NOTICES.

In our next No. we shall give the first of a set of Lectures on the Urinary Organs, by Mr. Brodie, in continuation of those published in our first volume.

The Lectures of Dr. Elliotson, Dr. Graves, and Mr. Amos, will be continued in our ensuing volume.

The list of persons connected with the *soi-disant* New Medical College, which we gave last week, has turned out wonderfully correct, considering that it seems to have been made in anticipation. We do not, however, observe that Dr. Ramadge, Dr. G. Smith, or Mr. D. O. Edwards, were among those present.

The letter of "A Senior Student" was received only as the Number (which, on account of the Index, required to be printed earlier than usual) was passing the press.

Mr. Bond's paper in our next.

DR. ELLIOTSON'S LECTURES.

In answer to numerous correspondents who have made inquiries with regard to Dr. Elliotson's lectures on the Theory and Practice of Medicine, we beg to state, that it is our intention to publish them at no distant period, though we cannot at present fix the exact date of their commencement. Their postponement has depended on circumstances which are intended to render our reports, when they appear, as accurate and complete as possible.

BOOKS RECEIVED FOR REVIEW.

Change of Air, or the Pursuit of Health. By James Johnson, M.D. Physician Extraordinary to the King.

An Introduction to the Study of Human Anatomy. By James Paxton, Member of the Royal College of Surgeons, &c.

A Supplement to the Pharmacopœia, and a Treatise on Pharmacology in general. By Samuel Frederick Gray, Lecturer on Materia Medica, &c.

The Nottingham Dispensary; its Necessity, Origin, Objects, and History. By Thomas Jowett, Surgeon.

Address of Earl Stanhope, President of the Medico-Botanical Society, for the Anniversary Meeting, January 16, 1831.

An Address to the Medical Profession, upon the Neglect of the Studies of Physiology and Morbid Anatomy: By R. Wade, Member of the Royal College of Surgeons, Lecturer on Morbid Anatomy, &c.

Proceedings of the Twelfth Anniversary Meeting of the Hunterian Society, held on the 9th of February 1831.

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INDEX TO VOL. VII.

(OCTOBER 2, 1830, TO MARCH 26, 1831.)

	Page		Page
A.			
ABOU-ZABEL, (Egypt) reports from the hospital of.....	409, 479, 511	tion of the lungs, 386; case 2, with hydrocephalic state of the fœtus, ib. ; case 3, with ascites in the fœtus, 387 ; case 4, with a morbid alteration of structure in the placenta, 387 ; case 5, complicated with ascites and anasarca in the mother, the fœtus and its involucra healthy, ib. ; case 6, with ascites in the fœtus, and morbid alteration of structure in the placenta ...	388
Abscess, vast hepatic, of liver—peritonitis consequent on the operation of opening it	217	Amos, Mr. and Dr. A. T. Thomson, notice of their appointment to deliver the lectures on medical jurisprudence in the London university..	409
Absorbents, Mr. Berry on the action of the	743, 777	——— lectures by, on medical jurisprudence.....	545, 609, 737
Accident, dangerous, from the escape of gas.....	540	——— opening lecture on medical jurisprudence, reply to an attack thereon published in the <i>Lancet</i>	665
Acid, sulphuric, case of poisoning by, with an account of the appearances of the body after death.....	27	Amputation of the thigh, case in which a patient died under the operation ...	88
—— prussic, two cases of fracture, followed by traumatic delirium, treated with large doses of	287	——— cases of, at the knee-joint, with observations, by M. Velpeau ...	344
—— nitric, case of poisoning by a solution of mercury in.....	329	Amusat, M. notice of three cases in which torsion of the arteries had been successfully practised by him, 32 ; some new remarks by him on the subject.....	683
Acupuncture, sciatica of twelve years standing cured by.....	447	Anatomy, the first two volumes of Mr. Bransby Cooper's lectures on, reviewed	273, 625
Acupuncturation, beneficial effects from, in a case of paralysis	607	Anatomy, comparative, Mr. Parker's lectures on:—introduction, 1 ; on the brain and nervous system, as developed in different classes of animals, 3 ; organic system of nerves, 65 ; application of this system to the development of the human brain, 67 ; functions of the fifth nerve, 68 ; its development increases as the brain becomes more simple, 69 ; the origin and development of the brain in the fœtus illustrated by the disposition of this organ in the four classes of vertebrate animals, 97 ; development of the spinal cord in various classes of animals, 129 ; its strict relation to the organs of locomotion in different classes of animals, 161 ; the medulla oblongata—third, sixth, and fifth pairs of nerves, 225 ; of the seventh and eighth pairs of nerves, 289 ; of the	
——— cases of rheumatism cured by, after having resisted other means	799		
Advertising, new mode of	407		
Affection, spasmodic, of hand and foot, Dr. Elliotson on a case of.....	423		
——— hydrancephaloid, of infants, arising from exhaustion, Dr. M. Hall on	462		
Affections, catarrhal, Dr. Graves on the effects of posture in	711		
Ague, Dr. Elliotson on a case of, with cerebral affection and bronchitis	633		
Ainger, Mr. on the pencil and pen-making machinery of Mr. Mordan ...	785		
Albumen, Dr. Graves on the appearance of, in the urine, in dropsy	585		
Amaurosis, cases of, treated by strychnine.....	94, 126		
——— M. Lisfranc on its treatment	411		
Amenorrhœa, Dr. Elliotson on	421		
Ammoniacum and galbanum, notice of a paper lately read by M. Don on the plants from which they are obtained	443		
Amnion, Dr. Lee on the pathology and treatment of dropsy of the	385		
——— cases of dropsy of the : case 1, ascites in the fœtus, and malforma-			

	Page		Page
senses generally—mechanism of the skin, and physiology of the sense of touch, in different animals, 353; on the sense of taste in different animals, 449; on the sense of smell in different animals, 513; on the organ of hearing in different animals, 577; on the sense of vision in different animals	705	of applying a ligature, had been successfully practised by M. Amusat ..	32
Anatomy, morbid, Dr. Graves on the value of, as illustrative of diseases of the brain	775	Arteries, M. Velpeau on the acupuncture of, in the treatment of aneurism	497
Andral, M. his work on pathological anatomy, reviewed	684, 718	——— femoral, ligature of—mortification of right leg—secondary hæmorrhage—ligature of external iliac—recovery	558
Aneurism, second report of Professor Mott's case of, treated by tying the artery <i>ultra tumorem</i> —fatal result ...	82	——— some new remarks by M. Amusat on the torsion of	683
——— case of, of the external iliac artery, for which the femoral artery, and subsequently the aorta, were tied, 145; in which a ligature was applied to the common iliac artery ...	147	Ascites, fatal case of, with an account of the post mortem examination	603
——— history of two cases of, successfully treated by ligature	150	Asthma, the Fothergillian medal awarded to Mr. W. A. Guy, for the best treatise on this subject	754
——— popliteal, cases of	158, 446	Autopsy, singular—spontaneous combustion	569
——— M. Velpeau on the acupuncture of	497		
——— aortic, bursting into lung ...	542	B.	
Angling, Sir Humphry Davy's passion for, illustrating the peculiarities both of his mind and attire	605	Barbadoes aloës, mode of preparing a pill of the	718
Ankle-joint, case of injury of the, with purulent deposition in opposite knee	254	Battley, Mr. on the <i>secale cornutum</i> ...	682
Aorta, death from rupture of one of the semilunar valves of the	109	——— announcement by, to the profession, of the opening of a laboratory and museum for materia medica and pharmacy	800
——— account of an operation for an aneurism of the	146	Belcombe, Dr. on a case of inversion of the uterus	783
——— case of aneurism of the, bursting into the pericardium	444	Bell, Mr. C. notice of the election of, as a member of the council of the College of Surgeons, in the room of Mr. Lucas.	182
——— Dr. Elliotson on aneurism of the	732	——— notice of the resignation by him of his professorships in the London University	252
Apothecaries, regulations of the society of	14	——— some remarks on his retirement from the London University, 303; his letter to his pupils on taking leave of them	308
——— queries connected with the regulations of the society of, with answers thereto by Mr. Watson, the secretary	543	——— his work on the nervous system, reviewed	434
Apoplexy, case of, with disease of the aorta	319	Bennett, Mr. reply by, to some remarks contained in an article on the London University	246
Arm, account of a case of amputation of the, at the shoulder-joint, successfully performed by M. Clot	511	Berry, Mr. on the mode in which the uterus contracts	263
Arthritis, acute, Dr. Graves on the effects of colchicum on the urine in, and of the appearance of albumen in the urine and dropsy	584	——— on the hour-glass contraction of the uterus	521
Artery, external iliac, case of aneurism of the, for which the femoral artery, and subsequently the aorta, were tied, 145; in which a ligature was applied to the common iliac artery	147	——— on the action of the absorbents	743, 777
Arteries, notice of three cases in which the method of twisting them, instead		Biggsby, Dr. cases related by, of poisoning by a solution of mercury and nitric acid	329
		Bill, anatomical, notice of a short conversation on, in the House of Commons	693
		Blackness, remarkable, of the tongue ...	245
		Bladder, puncture of the, caused by fracture of the pelvis	29
		——— diseased, Dr. Elliotson on a case of	794

	Page		Page
Bleeding, apparent utility of, in a case in which suicide was attempted by drowning	254	Brain, and nervous system, Mr. Parker on the, as developed in different classes of animals.....	3
Blood, cases shewing the ill effects of excessive loss of, with Dr. Elliotson's remarks.....	189	Brain, its origin and development in the fœtus, illustrated by its disposition in the four classes of vertebrate animals	97
Blundell, Dr. case of schirrus uteri communicated by, with malignant ulceration of the uterus, and extirpation of that organ	587	—— Dr. Prichard on an important remedy in some diseases of the	425
Bodies, foreign, in the trachea	334	—— the pathology of its affections obscure and difficult—consequent importance of guarded treatment and prognosis, 772; the opinions of Rostan, Lallemand, and certain other writers on the subject, rather immature and presumptuous.....	775
Bones, M. Dupuytren on various injuries of the, produced by gun-shot wounds	133	Braithwaite, Mr. case related by, in which a ligature was placed on both femoral arteries	558
—— on a method of cleaning	138	Brande, Mr. on the relation of vegeto-alkalies to common alkalies, and to certain proximate principles of vegetables	626
—— cuneiform, case of dislocation of the	704	Brighton hospital reports ..	382
Bone, superior maxillary, osteo-sarcoma of the—excision	221	Broughton, Mr. account by, of an individual in whom rheumatic fever was succeeded by pericarditis, hypertrophium cordis, and hemiplegia, terminating fatally at the end of four years and four months, with the appearances on dissection	77
—— superior maxillary, removal of the, for osteo-sarcoma, the external carotid being previously tied	286	Bronchocele, real, M. Larrey's description of	88
Books, analyses and notices of:—Mr. Willcock on the laws relating to the medical profession, 18, 47; Dublin hospital reports, 110, 150; Mr. Swan's demonstration of the nerves of the human body, 115; Mr. Fyfe's anatomy of the human body, 1b.; Medico-Chirurgical Transactions, 145; Dr. Macnish's philosophy of sleep, 246; Dr. Conolly on insanity, 266; Mr. Bransby Cooper's lectures on anatomy, vol. i. 273; Sir C. Scudamore on the efficacy of various medicines administered by inhalation in pulmonary consumption, 295; Sir Astley Cooper on the structure and diseases of the testis, (2d article) 296; (third article) 469; illustrations of Mr. S. Cooper's surgical dictionary, parts i. ii. and iii. 303; Mackenzie on diseases of the eye, 339; Mr. Potter's translation of M. Gannal's work on pulmonary consumption, 403; Mr. Hargrave's system of operative surgery, 404; Mr. Bell on the nervous system, 434; Mr. Lizars' article on surgery, 437; See-riq's anatomical demonstrations, 438; Dr. Combe on mental derangement, 500; Dr. Paris's life of Sir Humphry Davy, 526; medical zoology, No. 1, 530; companion to post-mortem examinations, 530; Mr. Rose's manual of analytical chemistry, 625; Mr. Bransby Cooper's lectures on anatomy, vol. ii. 1b.; Andral's pathological anatomy, 684, 718; Thackrah on health and longevity	821	Bronchitis, Dr. Elliotson on, 482, 634, 760	
Bostock, Dr. history by, of a case of stammering successfully treated by the long-continued use of cathartics	176	—— chronic, and disease of the heart, Dr. Elliotson on a case of	755
Boyle, Mr. account by, of a rival of St. John Long.....	12	Bryce, Dr. on the state and practice of medicine at Constantinople	488
		Buchanan, Dr. on lithotomy ..	331, 398
		—— on dilatation of the urethra	398
		Burns, Dr. Dorfmueller on the treatment of	87
		Burnett, Mr. Gilbert, on the active principles of certain vegetables, particularly observations on quinia, cinchonia, and the indigenous substitutes for them ..	749
		—— on the poppy ...	784
		Button-scurvy, Dr. Graves on the occurrence of iritis in	520
		Byron, Lord, account of his last illness, death, and post-mortem examination	491
		C.	
		Calculus, intestinal, case of, terminating in perforation	59
		Canal, alimentary, considered in a state of health, 685; in a state of disease ..	687
		Castration, Sir Astley Cooper on the operation of	472
		Cathartics, history of a case of stammering successfully treated by their long-continued use ..	176

	Page		Page
Cemetery, the pyramid, notice of some remarks on the subject of the	252	Combe, Dr. on mental derangement, reviewed	500
— illustrations of	817	Combustion, spontaneous, singular case of	569
Cervix femoris, case of fracture of the, produced in attempting to reduce a dislocation of the hip, and followed by bony union	382	Conception, extra-uterine, particulars of a case of	11
Charity, Royal Maternity, account by Dr. Ramsbotham of the cases which occurred in the Eastern district of the, during the last year.....	734	Concours, account of the mode of examination by the, with remarks thereon	153
Cheltenham hospital reports	444	Conquest, Dr. patient presented by him at St. Bartholomew's, on whom the operation of paracentesis, performed by him for hydrocephalus, had been successful	192
Chest, rheumatism of the, Dr. Elliotson on	125	Conjunctiva, Dr. Jacob on stains of the, and opacities of the cornea, produced by the application of nitrate of silver and similar substances	491
— case of affection of the respiratory nerves on the side of the	532	Confessions, Professor Amos on the law regarding, 609; advice to medical men respecting	610
Children, Mr. Amos on the laws relating to the birth of: "tenancy by the courtesy," as affected by the Cæsarian operation, 737; and by monsters, <i>ib.</i> ; anomalous cases, 738; hermaphrodites, <i>ib.</i> ; order of births, <i>ib.</i> ; infanticide, <i>ib.</i> ; concealment of the birth, 739; abortion, 740; impotence and sterility, <i>ib.</i> ; legitimacy —Douglas, Gardner, and Bimbury Peerage cases, 741; marriageable period, 742; remark on the celebrated warming-pan story, <i>ib.</i>		Conolly, Dr. his introductory lecture on opening the London University	38
Chimney-sweeper's cancer, cases of... Sir Astley	414	— his work on insanity, reviewed	266
Cooper on..... case of, in which the scrotum was successfully removed	827	Contagion, the merit of having been the means of settling the question of the reality of, claimed by Dr. Granville, 104	
Chlorurets, on the disinfecting quality of the	441	Contraction, permanent involuntary, of the muscles, case of.....	244
Chorea, Dr. Elliotson on	639, 652	Cooper, Mr. Bransby, on the anatomy of the shoulder-joint.....	676
Cholera, prevalence of, in Russia—a reward offered by the government for the best dissertation on the subject... ..	118	— lectures on anatomy, vol. i. reviewed, 271; vol. ii.	625
— account of a case published as such in a French journal	449	— Sir Astley, on the structure and diseases of the testis, reviewed, 296, 469	
Churchill, Sydney Guelph—a rival of St. John Long	12	— Mr. S. the first three parts of the illustrations to his Surgical Dictionary, reviewed	303
Circulation, utero-placental, Dr. Kennedy on, and the phenomenon of placental soufflet	110	— Mr. T. on the temperature of vegetables.....	716
Clark, Dr. E. on Vesuvius and Pompeii, 754		Cord, spinal, Mr. Parker on its strict relation to the organs of locomotion in different classes of animals	161
Clot, Dr. notices of a medical school founded by him in Egypt.....	27, 409	— on the development of the, in various classes of animals	129
— account of a case in which amputation of the arm at the shoulder-joint was successfully performed by him	511	Corowarai, notice of a new emetic so called	784
Colic from lead, Dr. Elliotson on	347	Cornea, Mr. Estlin on stains of the.....	811
Columna nasi, Mr. Liston on the operation for restoring the	466	Coroners' inquests, Professor Amos on the extreme importance of medical evidence given before	610
Colchicum, Dr. Graves on the effects of, on the urine in acute arthritis, and of the appearance of albumen in the urine in dropsy.....	584	Cough, spasmodic, Dr. Elliotson on a case of	575
Collegium Wakleyanum medico-chirurgico-apothecarium, particulars of the	824	Cowper, Mr. on recent improvements in paper-making	723
		Crampton, Dr. account by, of a case of aneurism of the external iliac artery, in which a ligature was applied to the common iliac artery	147
		D.	
		Darwall, Dr. on a peculiar species of paralysis	201

	Page		Page
Davy, Sir Humphry, his voltaic battery more powerful than the artillery of Britain, 603; effects of haste in increasing and diminishing his corpulence...	603	by him at the Linnæan Society, on the subject of the plants from which ammoniacum and galbanum are obtained	443
————— and Dr. Wollaston, compared as experimenters, 563; as philosophers	604	Dorf Müller, Dr. on the treatment of burns	87
563, 604.		Douchez, Mr. account by, of a case of extra-uterine conception ..	11
Death, case of, from rupture of one of the semilunar valves of the aorta ...	109	Dracunculus, cases of	410
Deceptions, optical, Mr. Faraday on a peculiar class of	561	Dropsy, Dr. Elliotson on its various forms and corresponding treatment...	313
Declarations, dying, Professor Amos on the duties of medical men regarding them	545	————— inflammatory, case of	381
Delirium, traumatic, two cases of fracture followed by	287	————— Dr. Elliotson on a case of	634
Depositions, puriform, Dr. Graves on the occurrence of, in different organs	616	of	571
Derangement, mental, Dr. Combe's work on, reviewed	500	————— Dr. Graves on the appearance of albumen in the urine in	585
Diploma of the London University, caution to students respecting the ...	17	Drowning, suicide attempted by—apparent utility of bleeding	254
Disease, fungoid, of the testis, Sir Astley Cooper on the dissection of the...	470	Dublin Hospital Reports, vol. 5, reviewed	110
————— cerebral, Dr. Graves on two cases of, which terminated fatally ...	769	Duffin, Mr. description by, of a new shield pessary	807
Diseases, feigned, Dr. Elliotson on, and on the impositions practised, or attempted to be practised, on medical men	234	Dupuytren, M. on wounds produced by fire-arms, 6, 51, 70, 133.	
————— calculous, Mr. Copland Hutchinson on the infrequency of, among seafaring people	365	Dysentery, on the employment of large doses of ipecacuanha in, without exciting vomiting	140
————— Dr. Yelloly on the tendency to, and on the concretions to which such diseases give rise	365	Dyspnœa, spasmodic, case of, cured by purgatives, with remarks	30
Dislocation, case of, of the hip, reduced more than a month after the accident	29	Dyspepsia, with palpitation, Dr. Elliotson on a case of	574
————— of the ossa innominata	115		
————— of the femur upon the dorsum of the ilii, 703; into the ischiatic notch, ib.; upon the pubes, ib.		E.	
————— complete, of the knee outwards, and compound fracture of opposite leg—recovery, 703; of the knee forwards, 704; of the external semilunar cartilage, ib.; of the cuneiform bones, ib.		Edinburgh Infirmary reports, 29, 94, 126, 191, 221, 319, 443.	
Dissection, remarks on some observations on the subject of, made by Mr. Mr. Guthrie, in his opening lecture...	724	————— Surgical Hospital reports ..	61
Dix, Mr. cases related by, of rheumatism cured by acupuncture, after having resisted other means	799	Egypt, notice of the establishment of a medical school in	27
Domeier, Dr. denial by, of his being the author of a paper published in the Medical and Physical Journal, attacking the medical examinations at Cambridge	320	Elbow-joint, cases of excision of, 61, 62.	
Don, M. notice of a paper lately read		Elephantiasis, case of	447
		Electricity, its employment in cases of paralysis from lead recommended by Dr. Elliotson	283
		Elliotson's, Dr. clinical lectures on the following subjects:—shaking palsy, 89; general history of the disease, ib.; various remedies—efficacy of iron, 91; disease of the heart—hypertrophy—wartlike excrescences on the valves of the aorta, 93; pleurisy, 120; rheumatism of the chest, 125; cases shewing the ill effects of excessive loss of blood, 182; rare malformation of the heart, 188; difficulty in procuring permission to make post-mortem examinations, 233; feigned diseases, and the impositions practised, or attempted to be practised, on medical men, 234; spasmodic contraction of foot and hand, 280; continued fever, 281; hemiplegia—	

	Page		Page
effects of iodine and strychnine, 282 ;		Elliotson, Dr. on the nature of the medical profession, 33 ; its advantages over other pursuits, 34 ; best modes of cultivating it.....	35
use of electricity in a case of paralysis from lead, 283 ; different forms of rheumatism, and corresponding treatment, <i>ib.</i> ; dropsy, various forms of the disease, and corresponding treatment, 313 ; hypertrophy of the left ventricle of the heart—ossification, <i>ib.</i> ; colic from lead, 347 ; scarlatina, 349 ; vomiting not dependent on inflammation, 375 ; efficacy of hydrocyanic acid, <i>ib.</i> ; chronic gastritis treated with antiphlogistics, 376 ; doctrines of Broussais, and practice of the late Dr. James Curry, 377 ; pericarditis, and disease of the heart, 379 ; diseases of the heart, 417 ; diseases of the skin—impetigo and eczema, 419 ; amenorrhœa, 421 ; gout, <i>ib.</i> ; lumbago, 422 ; epilepsy, 423, 482 ; spasmodic affection of the hand and foot, <i>ib.</i> ; itch, <i>ib.</i> ; nervous palpitation, 424 ; impetigo and lepra, 481 ; bronchitis, 482 ; remittent fever, 484 ; efficacy of croton-oil in epilepsy, 485 ; intermittent palsy, 486 ; disease of the heart and lungs—dropsy, 487 ; ovarian dropsy, 571 ; enlargement of the liver, with ascites, 573 ; pediculi, 574 ; dyspepsia, with palpitation, <i>ib.</i> ; erysipelas, 575 ; spasmodic cough, <i>ib.</i> ; paralysis agitans, 576 ; ague, with cerebral affection and bronchitis, 633 ; bronchitis, 634 ; epilepsy, with aura, <i>ib.</i> ; inflammatory dropsy, <i>ib.</i> ; paralysis, <i>ib.</i> ; ichthyosis, 636 ; chorea, 639 ; porrigo decalvans, <i>ib.</i> ; sea-scurvy, 642 ; pregnancy—necessity of scrutinizing suspicious enlargements of the abdomen, 647 ; pericarditis, 648 ; chorea, 652 ; glands in the human subject, 655 ; inhalation of chlorine and iodine in phthisis, 656 ; cancer of the womb, 697 ; palsy of the wrists from lead, 702 ; prolapsus of the vagina, 703 ; hysteria from imitation, 726 ; disease of the heart, 730 ; aneurism of the aorta, 732 ; chronic bronchitis, and disease of the heart, 755 ; gastritis, 759 ; leucorrhœa, <i>ib.</i> ; rheumatism, 769 ; bronchitis, <i>ib.</i> ; disease of the heart—rupture of an aortic valve, 793 ; diseased bladder, 794 ; ulcer in the pharynx, 795 ; peritonitis, <i>ib.</i> ; secondary syphilis—cutaneous eruption, 796 ; inflammatory headache after a blow, <i>ib.</i> ; ulcers of the legs—superiority of the liquor potassæ over sarsaparilla in cases of this description, 797 ; epilepsy	798	analysis of his paper in the Medico-Chirurgical Transactions, on the glands in the human subject	300
Elliotson's, Dr. lecture introductory to his course on the theory and practice of medicine	33	Embalming, account of the process of...	370
		Enlargement, congenital, of the tongue,	191
		Ennis, Mr. on chemical manipulation in general, and Mr. Faraday's work in particular	257
		Epilepsy, Dr. Sims on the pathology of,	374
		— Dr. Elliotson on	423, 798
		— with aura, Dr. Elliotson on a case of	634
		— case of, with aura—cured ...	767
		Erysipelas, Dr. Elliotson on a case of...	575
		Estlin, Mr. on stains of the cornea ...	811
		Evidence, medical, communication on the subject of.....	430
		— Professor Amos on,	545
		— hearsay, Professor Amos on the cases in which it is admissible, 548 ; generally inconclusive and worthless	595
		Examinations, post-mortem, Dr. Elliotson on the difficulty of procuring permission to make them	233
		— the companion to, reviewed.....	530
		— in chief, cross-examination, and re-examination, illustrations of the nature of	549
		— Latin, remarks on the abandonment of, by the College of Physicians in Ireland ...	566
		Excavation, tubercular, remarkable case of, communicating with the external air by an aperture between the ribs...	80
		Exhaustion, Dr. M. Hall on the hydrocephaloid affection of infants arising from ..	462
		Experience, medical, on the verification of	363
		Eye, Mr. Mackenzie on the diseases of the, reviewed	339
		— on the decomposition produced by dropping a solution of nitrate of silver, or acetate of lead, into the	496
		— Mr. Hunt on the stains produced by the improper use of nitrate of silver in some diseases of the	618
		F.	
		Faculty, re-organization of the, in Paris	120
		Faraday, Mr. on a peculiar class of optical deceptions.....	561
		— on oxamide	696
		Fees, remarks on the comparative amount of those at the London Uni-	

	Page		Page
versity and the different medical schools in the metropolis	25	Gastritis, chronic, Dr. Elliotson on the employment of antiphlogistics in cases of, 376; doctrines of Broussais, and practice of the late Dr. James Curry respecting	377
Femur, case of ununited fracture of the, cured by introducing a piece of silver wire between the ends of the bone ...	203	— Dr. Elliotson on a case of ...	759
— case of oblique fracture of the, followed by traumatic delirium	287	Gazette, London Medical, notice of the arrangements for the ensuing volumes of the work	59
— case of dislocation of the, upon the dorsum of the ilii, 703; into the ischiatic notch, ib.; upon the pubes	ib.	Gibbon, Dr. case of traumatic tetanus related by, successfully treated with turpentine.....	428
Ferraz, Mr. note from, respecting a misstatement in the <i>Lancet</i> , reflecting upon the demonstrators of St. Thomas's hospital.....	544	Glasgow Infirmary reports ...	254, 287
Fever, continued, Dr. Elliotson on a case of	281	Glanders, Dr. Elliotson on, in the human subject	300, 655
— remittent, Dr. Elliotson on	484	Gooch's, Dr. biographers accused by Dr. Granville of an act of injustice towards him, in attributing to Dr. Gooch the merit of having settled the question of the reality of contagion, 104; answer to, by A. M. 139; rejoinder by Dr. Granville, 207; their respective claims considered	214
— Dr. Graves on the seat of the swellings which, in its latter stages, are usually attributed to inflammation of the parotid or submaxillary glands	673	Gout, Dr. Elliotson on.....	421
— accompanied by bronchitis, Dr. Graves on the treatment in	712	Graham, Mr. account by, of a case of intestinal calculus terminating in perforation	59
— continued, case of	768	Granville, Dr. claim by, of the merit of having settled the question of the reality of contagion, 104; answer to, by A. M. 139; rejoinder by Dr. Granville, 207; the respective claims of Drs. Gooch and Granville considered	214
Fingers, convulsive paroxysms cured by applying a ligature to one of the, in which the affection seemed to commence	157	— evidence on the Gardner peerage, remarks on the proceedings at the Westminster Medical Society, at which Dr. G. brought forward the subject, in consequence of some remarks by Professor Anos in one of his lectures, 664; report of the proceedings	668
Fistula in perineo, remarks on	204	Graves's, Dr. clinical lectures on the following subjects:—Pompholyx's diutinus, 519; iritis, in button scurvy, 520; nitrate of silver in psoriasis, ib.; on pulsation of the jugular veins, 550; on the effects of colchicum on the urine in acute arthritis, and of the appearance of albumen in the urine and dropsy, 584; on the occurrence of puriform depositions in different organs, 616; on the seat of the swellings which, in the latter stages of fever, are usually attributed to inflammation of the parotid or submaxillary glands, 673; poisonous effect of the blood of a patient upon leeches, 675; some of the lower animals unaffected by poison, ib.; conjectures with regard to the action of poisons in general, ib.; on the effects of posture in catarrhal affections, 711; an opinion of Laennec's controverted: bronchitis not so constant an atten-	
— perineal, cases of	63		
Foot and hand, Dr. Elliotson on a case of spasmodic affection of the ...	280		
Fœtus, the origin and development of the brain in the, illustrated by the disposition of this organ in the four classes of vertebrate animals	97		
Forceps, English midwifery, historical analysis of the	456		
Forget, M. le docteur, account communicated by, of an operation for strangulated hernia, followed by recovery	503		
Fracture, ununited, of femur, cured by introducing a piece of silver wire between the ends of the bone	203		
— case of, of the pelvis, causing puncture of the bladder	29		
Fractures, cases of	287		
— and other injury about the pelvis	318		
— Mr. Neville on a new and simple mode of treating those of the lower extremities	678		
Fyfe's, Mr. anatomy of the human body, reviewed	115		
G.			
Gall-bladder, case of perforation of the, followed by peritonitis and death ...	632		
Gas, dangerous accident from the escape of	540		
— nitrous, Sir Humphry Davy's account of the effects of inhaling it.....	563		

	Page		Page
dant on fever, 712; treatment of fever accompanied by bronchitis, <i>ib.</i> ; another opinion of Laennec's controverted; the stethoscope does <i>not</i> afford a sure rule for the employment of venesection, 714; case of pulsation of the jugulars, accompanied by hypertrophy and dilatation of both the left and right sides of the heart, 715; two cases of cerebral disease terminating fatally, 769; the pathology of brain affections obscure and difficult—consequent importance of guarded treatment and prognosis, 772; the opinions of Rostan, Lallemand, and certain other writers, on the subject, rather immature and presumptuous, 775; value of morbid anatomy as illustrative of disease of the brain <i>ib.</i>		Haycraft, Dr. illustrations by, of Dr. Corrigan's theory of the motions and sounds of the heart, Part I. 193; Part II. 321; Part III. (in reply to Dr. Hope)..... 553,	590
Gregory, Dr. case communicated to him by Mr. Broughton, illustrating the pathology of rheumatism 77		Head, case of spasmodic action of the sterno-cleido-mastoideus, producing a continual motion of the..... 531	
Grey, Mr. account by, of a case of spasmodic dyspnoea cured by purgatives, with remarks 30		— and neck, case of spasmodic contortion of the <i>ib.</i>	
Guaco, observations on the, by Mr. Cæsar Hawkins 595		Headache, cure for 88	
Guy's hospital, on the evils resulting from the small size of its operating theatre 275		— inflammatory, after a blow, Dr. Elliotson on a case of 796	
Gwynne, Mr. G. case related by, in which fracture of the cervix femoris was produced in attempting to reduce a dislocation of the hip, and followed by bony union 382		Heart, illustrations by Dr. Haycraft of Dr. Corrigan's theory of its motions and sounds, 193; on the physical causes of the sound and impulse at the chest, 196; on the time of the first sound and impulse, 197; on its propulsion, <i>ib.</i> ; on the second or back stroke, 198; on the conditions of the diastole of the ventricle, 199; on the pulse and impulse, <i>ib.</i> ; on the simple dilatation of the ventricles, 321; on simple hypertrophy of the ventricles, 322; on hypertrophy with dilatation, <i>ib.</i> ; on hypertrophy of the auricle, with flaccidity of the ventricle, 323; on auricular valvular disease, 324; on sigmoid valvular disease, 325; on dilatation and roughness of the arch of the aorta, 326; conclusions, 327; practical remarks, 328; Dr. Haycraft's reply to Dr. Hope..... 553,	590
— case related by, of traumatic tetanus, treated by carbonate of iron—fatal 363		— Dr. Elliotson on a rare malformation of the 188	
		— on disease of the, 93, 417, 750.	
II.		— on a case of hypertrophy of the left ventricle of the ... 313	
Hæmatocele, Sir Astley Cooper on..... 473		— and lungs, Dr. Elliotson on a case of disease of the, with dropsy .. 487	
Hæmatemesis, fatal case of 827		— refutation, by Dr. Hope, of the various objections to his theory of the actions of the 390	
Halford, Sir Henry, on the influence of some of the diseases of the body on the mind 600		— Dr. Elliotson on a case of disease of the—rupture of an aortic valve ... 793	
Hall, Dr. M. on the hydrancephaloid affection of infants arising from exhaustion, 462		Hearing, Mr. Parker on the organ of, in different animals 577	
— on a new and simple mode of operation for nævus 677		Heberden, Dr. on the management of the sick 722	
Hand and foot, Dr. Elliotson on a case of spasmodic affection of the 423		Hemiplegia, Dr. Elliotson on a case of, treated by iodine and strychnine..... 232	
Harvey, Mr. remarks by, on a case of ruptured uterus..... 82		— Dr. Pritchard on the treatment of, and particularly on an important remedy in some diseases of the brain 425	
Harris, Mr. on the power of various substances to intercept magnetic action 669		— case of, with spasmodic contraction of the muscles of the arms—speech and deglutition impaired—serum in the ventricles, and arachnitis without ramollissement ... 825	
Hardy, Dr. case of inflammatory dropsy related by ... 381		Hernia, case of, of the stomach, with enormous enlargement of that organ 87	
Hargrave's, Mr. system of operative surgery, reviewed 404			
Hawkins, Mr. Cæsar, on the guaco ... 595			

	Page		Page
Hernia, strangulated, Mr. Macleod on its cure by the taxis	264	ment in cases of hemiplegia recommended by Dr. Elliotson	282
— strangled crural, account of an operation for—recovery	508	Iodine, case of enlargement of the spleen successfully treated by	479
— large inguinal—strangulation—operation—rare accident	478	Ipecacuanha, on the employment of large doses of, in dysentery, without exciting vomiting	140
— observations on, by Mr. Lizars,	656	Ireland, medical agitation in	504
Hermaphroditism, notice of a case of ...	536	Iris, Mr. Bowden on the physiology of the... ..	717
Hip, case of dislocation of the, reduced more than a month after the accident ..	29	Iritis, Dr. Graves on the occurrence of, in button-scurvy	520
Hint, a, for medical students	13	Itch, Dr. Elliotson on a case of	423
Hooping-cough, clinical lecture on, by Dr. A. T. Thomson	801		
Hope, Dr. refutation by, of the various objections to his theory of the action of the heart	390	J.	
Houlton, Mr. on the hyosciamus and taraxacum	509	Jacob, Dr. on the decomposition produced by dropping a solution of the nitrate of silver, or acetate of lead, into the eye	496
Huskisson, Mr. the circumstances of his late fatal accident	210	— on an improvement in spectacle frames	496
Hutchison, Mr. A. C. on the comparative infrequency of calculous diseases among sea-faring people	365	— on stains of the conjunctiva and opacities of the cornea, produced by the application of nitrate of silver and similar substances	491
Hunt, Mr. on the treatment of ptosis by operation	361	James, Mr. J. H. account by him of a case of aneurism of the external iliac artery, in which he tied the femoral artery and subsequently the aorta ...	145
— on the stains produced by the improper use of nitrate of silver in some diseases of the eye ...	618	Jewel, Mr. G. notice by, of some remarks in the <i>Lancet</i> on the evidence given by him on the inquest at Hampton	145
Hydrocephalus, the operation of paracentesis successful in a case of	192	— case of imperforate hy-	
Hydrocele, Sir Astley Cooper on	473	men communicated by	747
— encysted, case of—castration—alarming hæmorrhage from the cord	478	Joints, diseased, cases of	254
Hydrogen, carburetted, Sir Humphry Davy's account of the effects of exhaling it	563	Joke and no joke	407
Hymen, imperforate, case of, communicated by Mr. George Jewel	747	Jugulars, Dr. Graves on a case of pulsation of the, accompanied by hypertrophy and dilatation of both the right and left sides of the heart	715
Hyosciamus and taraxacum, memorandum respecting the	509	Jurisprudence, medical—notice of the regulation of the College of Surgeons of Edinburgh, enjoining an attendance of a three months' course of lectures on	539
Hysteria from imitation, Dr. Elliotson on a case of	726		
I.		K.	
Ichthyosis, Dr. Elliotson on a case of... ..	636	Keate, Mr. communication from, on the subject of lithoplatomy	397
Iliac, internal, account by Mr. Owen of the dissection of an aneurism, for which Dr. Stevens tied this artery... ..	149	Kennedy, Dr. physiological and practical observations by, on the uteroplacental circulation, and the phenomenon of placental soufflet	110
Impetigo and lepra, Dr. Elliotson on... ..	481	Kidney, case of rupture of the	828
— and eczema, Dr. Elliotson on	419	— and bladder, case of extensive disease of the	139
Inflammation, vomiting not dependent on	375	Kidneys and bladder, case of disease of the	288
Institution, medical provident, of Scotland, notice of the	29		
Insanity, Dr. Conolly's work on, reviewed	266		
Intelligence, French medical, extract of a letter from a Paris correspondent	431		
— Irish medical, extract of a letter from a Dublin correspondent, ..	400		
Iodine and strychnine, their employ-			

	Page		Page
King, Mr. explanation by him of some of his observations respecting hospital surgeons, made at the late election for coroner	160	Literature, medical, notice of two works on the taps connected with.....	87
— note from a pupil, giving an account of the proceedings at a meeting of the pupils at the Aldergate School of Medicine, for the purpose of presenting him with some mark of their respect, 256; letter from a pupil who moved an amendment protesting against the above communication	238	Lithoplastomy, Dr. Buchanan on, 331; note from Mr. Keate on the subject of, 397	
Knee-joint, cases of amputation at the, with observations by M. Velpeau ...	344	Liver, abscess in the right lobe of the—puncture of the gall-bladder—escape of the contents of the abscess by the intestines—subsequent abscess of the left lobe bursting into the peritoneum, 216	
Knee, case of complete dislocation outwards of the, and compound fracture of opposite leg—recovery	703	— cases of disease of the.....	216
— case of dislocation of the, forwards	704	— abscess resting on the convex surface of the, communicating with the lung, and opening externally	217
— right, case of dislocation of the external semilunar cartilage of the ...	704	— vast hepatic abscess of the—peritonitis consequent on opening it	217
L.		— case of enlargement of the, extending into pelvis, with hydatids and fistulous openings from the gall-bladder into the bronchi	542
Labarraque, M. report presented by him to the council of health in Paris, on the removal of the dead bodies that had been deposited in the vaults of St Eustache, after “the three days”.....	441	— Dr. Elliotson on a case of enlargement of the, with ascites.....	573
Laceration of uterus and vagina—account of two cases of recovery from, 412		Lizars', Mr. article on surgery, written for Brewster's Encyclopædia, reviewed	437
Laennec, his opinion that bronchitis is a constant attendant on continued fever, controverted, 712; that the stethoscope affords a sure rule for the employment of venesection, also controverted	714	— observations by, on hernia, 656	
Larrey, M. his description of real bronchocele	88	Lloyd, Mrs. account of the coroner's inquest on her body—alleged to have come to her death in consequence of the treatment adopted by St. John Long	223
Larynx, chronic cynanche, case of, in which the operation of tracheotomy was performed	333	London hospital reports, 286, 446, 540, 606, 703, 767.	
Lead, Dr. Elliotson on a case of palsy of the wrists from.....	702	London University, remarks on the dissensions at the	117, 215, 252
Lectures, Dr. Elliotson's, notice of their postponement for a short period, at his request.....	86	— Mr. Bell's resignation	252
Leeches, poisonous effect of the blood of a patient upon	675	— reply, by a master of medicine and surgery in this institution, to some remarks suggested by the resignation by Mr. Bell of his professorships	341
Lee, Dr. on the pathology and treatment of dropsy of the amnion	385	— notice of a meeting of the pupils, for the purpose of endeavouring to effect the removal of Mr. Pattison	632
Legs, ulcers of the, Dr. Elliotson on the superiority of liquor potassæ over sarsaparilla in cases of this description	797	— reasons why a charter should not be granted to this institution.....	662
Leucorrhœa, Dr. Elliotson on a case of, 759		Long, St. John, full report of his trial for manslaughter in the case of Miss Cashin, 166; further particulars, with remarks on the case, and on the inadequacy of the sentence	174
Ligatures, account of M. Roux's mode of applying them	539	— proposal that a subscription be entered into for defraying the expenses of prosecuting him for the manslaughter of Miss Cashin, 214; the expenses to be paid out of his fine.....	256
Lips, cancerous tumor of the	190	— death of another of his female patients, alleged to be in consequence of his treatment	222
Liston, Mr. on the operation for restoring the columna nasi	469	— remarks on his letter published in the Standard	278
Lisfranc, M. on the treatment of amaurosis	411	— true bill found against	

	Page		Page
him for the manslaughter of Mrs. Lloyd.....	342	Mercury, case of poisoning by a solution of, in nitric acid.....	329
—— remarks on his <i>latest</i> trial.....	683	Merriman, Dr. on a mode of extracting pessaries	521
Lowder, Dr. on the employment of colchicum in rheumatism	810	Middlesex hospital reports	128
Lumbago, Dr. Elliotson on.....	422	Midwifery, practice of—resolutions proposed by Dr. Granville at a meeting of the Westminster Medical Society, 320	
Lung aortic aneurism hursting into the	542	Morphine, four cases of head ache treated with success by this remedy, 88	
Lungs, cases of emphysema of the	826, 827	Mott, Mr. second report of the case of aneurism treated by him by tying the artery <i>ultra tumorem</i> —fatal result ...	82
—— case of inflammation of the	829	Mummy, account of the examination of a, with a history of the art of embalming.....	367
Lunacy bill, the new, remarks on, 598, 627		Muscles, on permanent involuntary contraction of the	244
—— question as to the construction of one of the clauses of the act relating to, 523; opinion respecting, 560; observations on the subject	597	—— sterno-cleido mastoideus and trapezius, case of spasmodic action in the.....	534
		—— sterno-clido-mastoideus, spasmodic action in the, 812; analogous case	813
M.			
Macintyre, Mr. case related by, of recovery from ruptured uterus, 9; remarks on the case by Mr. Harvey, 82; rejoinder to, by Mr. Macintyre, 137		N.	
Macnish, Dr. on the philosophy of sleep, reviewed	246	Nævus maternus, case of, 444; with varicose veins	445
McLeod, Mr. on the cure of strangulated hernia by the taxis	264	—— Dr. Marshall Hall on a new and simple mode of operation for	677
McNamara, Mr. cases related by, of foreign bodies in the trachea	334	Neck, case of disordered action of the muscles of the	530
Mackenzie, Mr. on the diseases of the eye, reviewed	339	—— deep-seated tumor of the—extirpation—recovery	606
Mackelcan, Mr. note from, in reply to some remarks on a circular issued by him	477	—— case of spasmodic action of the... ..	814
Magenis, the late Dr. James, biographical sketch of	464	Nerve, fifth, Mr. Parker on the functions of the, 68; its development increases as the brain becomes more simple ...	69
Malpractice, criminal, in medicine, observations on the state of the law relating to.....	211	Nerves, organic system of, Mr. Parker on the, 65, application of this system to the development of the human brain	67
Manipulation, chemical, remarks on, and Mr. Faraday's work in particular	257	—— Mr. Parker on the seventh and eighth pairs of	289
Manslaughter, the new case of, (Mrs. Lloyd's case), remarks on	249	—— cases illustrative of various diseases of the	530
Marsh, Dr. on a peculiar convulsive disease affecting young children, which may be termed spasm of the glottis... ..	337	—— Mr. Swan on a mode of dissecting them	522
Materia medica and pharmacy, announcement by Mr. Battleley of the opening of a laboratory and museum for	800	—— respiratory, case of affection of the, on the side of the chest.....	532
Meath hospital reports.....	216	—— respiratory and voluntary, case illustrating the difference between the	533
Medicine, present state of the London and Paris schools of	21	Neville, Mr. on the mechanical means employed in the treatment of fractures of the lower extremities	678
—— address of the metropolitan society of general practitioners in ...	54	Norfolk and Norwich hospital reports... ..	190
—— surgery in the eye of the law a part of	47	Northampton General hospital reports, 288, 384,	444
—— sketch of the state and practice of, at Constantinople.....	483	Nuttall, the late Dr. notice of a subscription for his widow and children,	
—— Birmingham school of, names of the students who obtained the medals offered by the lecturers	544		
—— new college of	791		
Medulla oblongata and its nerves, Mr. Parker on the	265		

	Page		Page
344; note from Mr. Tucker respecting the	430	in which the affection seemed to commence	157
----- list of subscriptions received for his family	534	Pediculi, Dr. Elliotson on the eradication of	574
O.			
Oil, croton, Dr. Elliotson on its efficacy in epilepsy	485	Pelletan, M. notice of the election of, to the chair of Physique Médicale ...	791
Opinions, medical, advice by Professor Amos respecting the statement of, in courts of justice—simple and popular language recommended	612	Pelvis, case of fracture of, causing puncture of the bladder	29
Osteo-sarcoma, case of, of the superior maxillary bone	221	----- fracture of the—rupture of the urethra—cure	318
----- removal of the superior maxillary bone for, the external carotid being previously tied	286	----- case of enlargement of the liver extending into the, with hydatids, and fistulous openings from the gall-bladder into the bronchi	542
Ossa innominata, case of dislocation of the	115	----- injury of the — inflammatory swelling in left groin, threatening suppuration—cure	318
Owen, Mr. account by him of the dissection of the parts concerned in an aneurism, for which Dr. Stevens tied the internal iliac artery	149	----- laceration of the urethra—cure	318
Oxamide, Mr. Faraday on	696	Perforation, account of a case of intestinal calculus terminating in	59
Oxide, nitrous, the effects of inhaling it, as exhibited in the person of Sir Humphry Davy	527	Pericarditis, Dr. Elliotson on a case of	648
P.			
Palsy, intermittent, Dr. Elliotson on ...	486	----- and disease of the heart, Dr. Elliotson on a case of	379
Palpitation, nervous, Dr. Elliotson on a case of	424	Peritonitis, case of—old sac containing cartilage	541
Paper-making, Mr. Cowper on recent improvements in	723	----- Dr. Elliotson on a case of	795
Parker's, Mr. Lectures on comparative anatomy, 1, 65, 97, 129, 161, 225, 289, 353, 449	577	Pessaries, Dr. Merriman on a mode of extracting them	521
Parkinson, Mr. remarks by, on "turning"	261	Pessary, a new shield, description of, by Mr. Duffin	807
----- account by, of a case of recovery from ruptured uterus	173	Pharynx, Dr. Elliotson on a case of ulcer of the	795
Paris hospital reports, 83, 254, 312, 344, 411, 478, 510, 539	632	Philip, Dr. reply by, to a review of his treatise on the means of preserving health, in the Medico-Chirurgical Review, 73; Dr. Johnson's rejoinder, 107; Dr. Philip's answer thereto ..	175
Paris's, Dr. life of Sir Humphry Davy, reviewed	526	Physician's diary in Blackwood, remarks on some of the "passages" contained in the	118, 408
Paracentesis, the operation of, successful in a case of hydrocephalus	192	Physicians, college of, notice of the commencement of the evening meeting at the	539
Paralysis, Dr. Darwall on a peculiar species of	201	----- papers read at the—Sir Henry Hallford on the influence of some of the diseases of the body on the mind, 600; Dr. Heberden on the management of the sick ...	722
----- from lead, Dr. Elliotson on the use of electricity in cases of	283	Physique médicale, account of the opening of the concours for the professorship of	659
----- Dr. Elliotson on a case of ...	634	Pidduck, Dr. note from, respecting the treatment of glands in horses	655
----- case of—acupuncture—benefit	607	Pleurisy, Dr. Elliotson on	120
----- agitans, Dr. Elliotson on a case of	576	Plenderleath, Dr. case related by, of death from rupture of one of the semilunar valves of the aorta	109
Paroxysms, convulsive, cured by applying a ligature to one of the fingers,		Poisoning with sulphuric acid, account of a case of, with a description of the appearances of the body after death	27
		----- case of, by a solution of mercury in nitric acid	329
		Poison, some of the lower animals un-	

affected by, 675 ; conjectures with regard to the action of poisons in general	ib.	claims of Drs. Gooch and Granville to the settlement of this question, considered	214
Politics, Dr. Elliotson's	682	discussion, notice respecting it	608
Pompholyx diutinus, Dr. Graves on ...	519	Quinine, sulphate of, on a mode of correcting the bitterness of its taste	88
Poppy, Mr. Gilbert Burnett on the	784	the phosphate of, a much pleasanter remedy than the sulphate	88
Porter, Mr. W. H. account by, of two cases of aneurism successfully treated by ligature	150	Quinia and cinchonina, Mr. Gilbert Burnett on, and the indigenous substitutes for them	749
case of chronic cynanche laryngea, for which the operation of tracheotomy was performed by him	333		
Porriro decalvans, Dr. Elliotson on	639		
Posture, Dr. Graves on the effect of, in catarrhal affections	711		
Potter's, Mr. translation of M. Gannal's work on pulmonary consumption, reviewed	403		
Practitioners, general, in medicine, address of the metropolitan society of ...	54		
Pregnancy—necessity of scrutinizing suspicious enlargements of the abdomen	647		
Press, non-medical, some remarks on the, suggested by certain disquisitions which have lately appeared on the subject of quackery, the study of anatomy, the coroner's qualifications, &c.	57		
Prichard, Dr. on the treatment of hemiplegia, and particularly on an important remedy in some diseases of the brain	425		
Profession, medical, Dr. Elliotson on the nature of the, 33 ; its advantages over other pursuits, 34 ; best modes of cultivating it	35		
Mr. Willcock on the laws relating to the, reviewed, 18, respect shewn by the French government to the	215		
Psoriasis, Dr. Graves on the employment of nitrate of silver in	520		
Ptoxis, Mr. Hunt on the treatment of, by operation	361		
Puerpera, case of—employment of bleeding—fatal result	443		
Pulse, on the effects produced by posture on its frequency and character, in health and disease	113		
Pupils, medical, notice to, respecting the new regulation of the Apothecaries' Company for their registration,	560		
Purgatives, account of a case of spasmodic dyspnoea cured by, with remarks	50		
Purpura hæmorrhagica—land-scurvy ...	128		
Q.			
Quacks and quackery, remarks on, 203, Quackery—a Long advertisement	405 477		
Quarantine question, the respective			

Q.

Quacks and quackery, remarks on, 203, 405
Quackery—a *Long* advertisement 477
Quarantine question, the respective

	Page		Page
on the pencil and pen-making machinery of Mr. Mordan, 785; Mr. Ritchie on elasticity, and especially the elasticity of torsion, with its application in delicate experimental research	815	Small-pox in India, extract of a letter on the subject of.....	175
Royal Society, notice of the election of the Duke of Sussex as its president...	311	Smell, Mr. Parker on the sense of, in different animals	513
Rumsey, Mr. on a remarkable blackness of the tongue.....	245	Smith, Dr. F. case related by, of extensive disease of the kidney and bladder.....	138
		— — — Mr. S. on permanent involuntary contraction of the muscles	244
		— — — Dr. Southwood, notice of his appointment to deliver the spring course of lectures on physiology in the London University.....	409
S.		Society, metropolitan, of general practitioners, remarks on the, 83; resolution passed at a general meeting of the	160
St. George's Hospital reports, 63, 218, 318	414	Society, medico-chirurgical, remarks on the present state of the	820
St. Thomas's Hospital reports	182	Soirée extraordinary at the London University, particulars of a	372
St. Bartholomew's Hospital reports.....	192	Somme, Dr. case related by, in which an ununited fracture of the femur was cured by introducing a piece of silver wire between the ends of the bone...	203
Scalp wounds, cases of,	218, 221	Soufflet, placental, Dr. Kennedy on the phenomenon of.....	110
Scarlatina, Dr. Elliotson on	349	Sore, cancerous, in the scrotum of a chimney-sweeper—implication of the tunica vaginalis testis—enlarged glands in the groin—operation—cure ..	415
Schools of medicine, remarks on the present state of those of London and Paris	21	— warty, in left groin of a chimney-sweeper—enlarged iliac glands—employment of iodine—cicatrization of the sore	416
School, medical, in Egypt, established by M. Clot, notice respecting the	409	Spectacle-frames, Dr. Jacob on an improvement in.....	496
Science, medical, observations on the state of, in England, 274.....	339	Spine, dislocated, case of, without fracture—air under the arachnoid.....	541
Sciatica, case of, of twelve years standing, cured by acupuncture	447	— Mr. Swan on supposed diseases of the, and the ill effects of a continued recumbent position	620
Scirrhous uteri, case of, with malignant ulceration of the uterus, and extirpation of that organ.....	587	Spleen, case of enlargement of the, successfully treated by iodine	479
Seudamore, Sir Charles, his work on the efficacy of various medicines administered by inhalation, in pulmonary consumption, reviewed.....	295	— — — Mr. Tuson on the uses of the... ..	716
— — — communication from, on the subject of the analysis of his work on inhalation in pulmonary consumption ..	433	Stammering, history of a case of, successfully treated by the long-continued use of cathartics	176
Sea-scurvy, Dr. Elliotson on a case of. .	642	Stevens, Dr. account of the dissection of the parts concerned in an aneurism for which he tied the internal iliac artery.....	149
Secale cornutum, analysis of the, by Mr. Battley	681	Stomach, case of hernia of the, with enormous enlargement of that organ	87
Seerig's, Professor, anatomical demonstrations, part I, reviewed	438	— — — account of a case in which it was almost entirely converted into cartilage	447
Serres, M. case of perforation of the gall-bladder treated by	632	Strychnine, cases of amaurosis treated by ..	94, 126
Shaking palsy, Dr. Elliotson on	91	— — — and iodine, their employment in cases of hemiplegia recommended by Dr. Elliotson	282
Shoulder-joint, Mr. Bransby Cooper on the anatomy of the	676	Students, medical, English and French, some remarks on the, in the way of contrast.....	474
Silver, nitrate of, Dr. Graves on its employment in psoriasis	520		
— — — Mr. Hunt on the stains produced by its improper use in some diseases of the eye	618		
Sins, Dr. on the pathology of epilepsy, 374	374		
Sinapisms, on the most efficacious mode of applying them	524		
Skeleton, living, notice of a.....	536		
Skin, Mr. Parker on the mechanism of the, and the physiology of the touch, in different animals	353		
— — — Dr. Elliotson on the diseases of the.....			
Sleep, Dr. Macnish on the philosophy of, reviewed	246		

	Page		Page
Students, French medical, prospect of tranquillity among the—petition of the private professors	534	— scirrhus, Sir Astley Cooper on...	471
— medical, a hint for	13	Testicle, on the various causes of wasting of the	116
— regulations of the Society of Apothecaries to be observed by those whose attendance on lectures commenced after 1st of January	15	Tetanus, some remarks on its pathology	312
Surgeons, regulations of the College of, and of the Society of Apothecaries ...	17	— traumatic, successfully treated with turpentine	428
— College of, notice of Mr. Bell's election as a member of the council, in the room of Mr. Lucas ...	182	— treated with carbonate of iron—fatal, 383; with large doses of opium ..	823
— remarks on the outrage at the, 760; full account of the disturbance—interruption of the lecture—and forcible ejection of Mr. Wakley	763	Tibia, case of caries of the, with ulceration of the cartilages of the knee-joint, and purulent deposition in opposite knee	255
— Irish College of, remarks on the.....	537	— case of compound fracture of the, and simple fracture of fibula of right leg, followed by traumatic delirium, treated with large doses of prussic acid	287
— naval, remarks on the proceedings at the College of Surgeons respecting the regulation for excluding warrant officers from court, 663; curious particulars of the meeting, 670; correction of a misstatement in the report, with some further remarks on the subject	693, 822	Tickets, perpetual, to the medical classes at the different hospital schools in London and at the London University, table shewing the comparative amount of fees paid for	26
— apothecaries, druggists, and quacks, account of the number of each practising in the township of Stockport	443	Thackrah, Mr. his work on health and longevity, reviewed	821
Surgeons, remarks on the apprenticeship system of the Irish college of ...		Theatre, operating, at Guy's, on the evils resulting from the smallness of the ..	273
— riot at the College of—communication on the subject, 786; additional remarks	787, 818	Thigh, case in which a patient died during amputation of the	88
Surgery, article on, written by Mr. Lizars, for Brewster's Encyclopædia, reviewed	437	— bone, fractured, Mr. Neville on the management of	680
Swan's, Mr. demonstration of the nerves of the human body, reviewed	115	Thomson, Dr. A. T. clinical lecture by, on hooping-cough	801
— and his work on the nerves	209	Tongue, congenital enlargement of the,	191
— on the mode of dissecting the nerves ..	522	— remarkable blackness of the ..	245
— on supposed diseases of the spine, and the ill effects of a continued recumbent position ..	620	Trachea, cases of foreign bodies in the ..	334
Swellings, Dr. Graves on the seat of those which, in the latter stages of fever, are usually attributed to inflammation of the parotid or submaxillary glands	673	Tucker, Mr. note from, respecting the subscription for the family of the late Dr. Nuttall	430
Symonds, Dr. case of extirpation of an inverted uterus related by	242	Tumor, cancerous, of the lips.....	190
Syphilis, secondary, Dr. Elliotson on a case of, with cutaneous eruption.....	796	— large, growing from the side of the thyroid gland, account of a case of a, for which a ligature was placed on the pedicle, and was followed by death in eighteen hours	510
System, nervous, Mr. Bell's work on the, reviewed	437	— deep-seated, of the neck—extirpation—recovery	606
		Tunica vaginalis, Sir Astley Cooper on ..	473
		“Turning,” Mr. Parkinson on	261
		Turner, Daniel, hint by, to medical students ..	13
		Turpentine, case of traumatic tetanus successfully treated with	428
		Tuson, Mr. on the uses of the spleen ...	716
		Twining, Mr. on the employment of large doses of ipecacuanha in dysentery, without exciting vomiting	140
		Tympanitis, removal of, by passing a gum elastic tube through the rectum ..	826

T.

Taste, Mr. Parker on the sense of, in different animals 449 |

Testis, Sir Astley Cooper on the structure and diseases of the, reviewed, 296, 469.

U.

Ulcer, cancerous, and warty fungus in the left groin of a chimney-sweeper,

	Page		Page
beginning with a wart on the scrotum —no relief.....	414	and Anchor—account of the proceed- ings at the meeting	792
Ulceration, malignant, use of the chlo- ride of soda in	384	Watchfulness, Professor Amos on the importance of, on the part of medi- cal men, 548; case in illustration ...	596
Urethra, Dr. Buchanan on dilatation of the.....	398	West, Mr. on a method of cleaning bones	133
—cases proving laceration of the, not to be necessarily fatal.....	318	—case of disease of the kid- neys and bladder, communicated by	288
Uterus, Mr. Harvey on rupture of the... 82		—case communicated by, of aneurism of the aorta bursting into pericardium	444
—ruptured, account of a case of recovery from	173	Western dispensary reports.....	447
—case of recovery from, 9; remarks on the case by Mr. Har- vey, 82; rejoinder to, by Mr. Mac- intyre.....	137	Westminster hospital reports	158
—inverted, case of, with remarks, for which extirpation was performed	212	Willcock, Mr. on the laws relating to the medical profession, reviewed, 18,	47
—Mr. Berry on the mode in which it contracts	263	Women, on the period of puberty in ..	28
—on the hour-glass con- traction of the	521	Womb, Dr. Elliotson on a case of can- cer of the	697
—and vagina, account of two cases of recovery from laceration of the	412	Wood, Kinder, Esq. biographical sketch of	622
Uterus, Dr. Belcombe on a case of in- version of the	783	Wounds, M. Dupuytren on those pro- duced by fire-arms..... 6, 51, 70,	133
		—gun-shot, M. Dupuytren on the dilatation of, 70; on those made by bullets which traverse the bones and soft parts	73
		—M. Dupuytren on the circumstances, the period, and the manner, in which amputation, if ne- cessary, should be performed	134
V.		—on various injuries of the bones produced by	133
Vagina, Dr. Elliotson on a case of pro- lapsed of the	703	—of the scalp, cases of, and their consequences	218
Vegetables, Mr. T. Cooper on the tem- perature of	716	Wentmore, Mr. some remarks by, on an inquest at St. George's hospital ...	206
Veins, anomalies in the distribution of some of the	87	Wrist, case of spasm of the, with swell- ing of the hand and fore-arm—ineffi- cacy of antiphlogistics—cure by com- pression.....	825
—cases in which fatal results have been produced by the entrance of air into the	510	Wrists, Dr. Elliotson on a case of palsy of the, from lead	702
—jugular, Dr. Graves on pulsation of the.....	550	Wry neck, account of two cases of	814
Velpeau, M. observations by, on am- putation of the knee-joint	344		
—memoir by, on the acu- puncture of arteries in the treat- ment of aneurism	497	Y.	
Vision, Mr. Parker on the sense of, in different animals	705	Yelloly, Dr. on the tendency to calcu- lous diseases, and on the concretions to which such diseases give rise	366
Vomiting, Dr. Elliotson on the efficacy of hydrocyanic acid in cases of	375	Z.	
		Zoology, medical, the first No. of this work reviewed	530
W.			
Wakley's "entertainment" at the Crown			

END OF VOL. VII.



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